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INTERMOUNTAIN POWER PROJECT

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

for

±500 KV DC Intermountain-Adelanto Line 1 Transmission Line

APR 1984

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TRANSMISSION LINE CONSTRUCTION, OPERATION, AND MAINTENANCE PLAN

FOR

INTERMOUNTAIN POWER PROJECT
500 kV DC ADELANTO TO IPP

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
DIXIE NATIONAL FOREST

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INTERMOUNTAIN POWER PROJECT
INTERMOUNTAIN POWER AGENCY

In witness whereof, the parties hereto have executed this PLAN as of

April 20, 1984
(Date)

UNITED STATES OF AMERICA

BY _____
Forest Supervisor, Dixie National Forest

_____
District Manager, Richfield District Office - Bureau of Land Management

The BLM/FS signatures are valid subject to inclusion of the attached errata sheet discussed in a letter to Los Angeles Department of Water and Power dated April 20, 1984.

Intermountain Power Project

BY _____
IPP Director

BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

for

±500 Kv DC Intermountain-Adelanto Line 1

Transmission Line

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CONSTRUCTION, OPERATIONS AND

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for

[illegible]00 Kv DC Intermountain-Adelanto Line 1

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Definitions

for

Construction, Operations and Maintenance Plan (COM Plan)

±500-kV DC Intermountain-Adelanto Line 1

Definitions: The following terms, when used in this COM Plan, shall be understood to have the following respective meanings:

Authorized Officer: The official representative of the BLM/FS or Designate having overall responsibility for administering and enforcing the grant/permit provisions, as well as resolving any conflicts that arise relating to the COM Plan on Public Lands under BLM/FS jurisdiction.

BLM: Bureau of Land Management, an agency of the U.S. Department of the Interior.

Site Construction Manager: A member of the Construction Manager's Staff responsible for monitoring the work performed by construction contractors and enforcing the requirements of the construction contracts.

Construction Inspectors: Members of the Construction Manager's Staff responsible for inspecting the work performed by construction contractors and enforcing the requirements of the construction contracts.

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for

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±500-kV DC Intermountain-Adelanto line 1

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Site Construction Manager: A member of the Construction Manager's Staff responsible for monitoring the work performed by construction contractors and enforcing the requirements of the construction contracts.

Construction Inspectors: Members of the Construction Manager's Staff responsible for inspecting the work performed by construction contractors and enforcing the requirements of the construction contracts.

Construction Manager: The Los Angeles Department of Water and Power has been selected by the grant/permit holder to provide administration, engineering and construction management.

COM Plan: Construction, Operations and Maintenance Plan.

FS: U.S. Forest Service, an agency of the U.S. Department of Agriculture.

Field Compliance/Monitoring Officer (FCO): An official designate of the appropriate BLM/FS Authorized Officer having overall responsibilities for administering and enforcing grant and permit stipulations as they relate to the construction and operation of the Adelanto 1 Powerline.

Grant/Permit Holder: Intermountain Power Agency or an agent authorized to act on its behalf.

IPA: The Intermountain Power Agency, a political Subdivision of the State of Utah organized and existing under the Interlocal Co-operation Act, Title II, Chapter 13, Utah Code Annotated 1953, as amended.

Lead Transmission Design Engineer: A member of the Construction Manager's Staff responsible for the overall transmission line project including engineering and construction.

Construction Manager: The Los Angeles Department of Water and Power has been selected by the grant/permit holder to provide administration, engineering and construction management.

COM Plan: Construction, Operations and Maintenance Plan.

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Grant/Permit Holder: Intermountain Power Agency or an agent authorized to act on its behalf.

IPA: The Intermountain Power Agency, a political subdivision of the State of Utah organized and existing under the Interlocal Co-operation Act, Title 11, Chapter 13, Utah Code Annotated 1953, as amended.

Lead Transmission Design Engineer: A member of the Construction Manager's staff responsible for the overall transmission line project including engineering and construction.

LADWP: Los Angeles Department of Water and Power.

Project Inspector (PI): An official designate of the FCO having responsibility for the on-the-ground administration of the provisions in the grants/permits and stipulations.

Right-of-Way Grant: The instrument issued by the BLM on April 3, 1980 authorizing the use of a right-of-way over, upon, under or through Public Lands under its jurisdiction, including stipulations found therein and in the Notice to Proceed.

Special Use Permit: The instrument issued by the FS authorizing the use of a right-of-way over, upon, under or through National Forest System lands under its jurisdiction, including stipulations found therein.

Temporary Use Permit (TUP): The instrument issued by BLM to the grantee for temporary activities outside of the transmission line right-of-way.

LADWP: Los Angeles Department of Water and Power.

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CONSTRUCTION, OPERATIONS

AND

MAINTENANCE PLAN

INTRODUCTION AND BACKGROUND

±500 KV DC Intermountain-Adelanto Line 1

Transmission Line

Prepared at the Offices of

Los Angeles Department of Water and Power

111 North Hope Street

Los Angeles, California 90051

CONSTRUCTION, OPERATIONS

AND

MAINTENANCE PLAN

INTRODUCTION AND BACKGROUND

±500 KV DC Intermountain-Adelanto Line 1

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CONSTRUCTION, OPERATIONS

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±500 KV DC Intermountain-Adelanto Line 1

Transmission Line

INTRODUCTION

The ±500 KV DC Intermountain-Adelanto Line 1, hereafter known as the DC Transmission Line, is required by the Intermountain Power Agency (IPA) to deliver electrical power from the IPP Generation Station located near Delta, Utah, to a HVDC converter station near Victorville, California, where the Southern California participants in IPP will receive their power allocations. Construction of the DC Transmission Line is critical based on its scheduled in-service date to avoid extensive cost impact at the generation station due to delays. This DC Transmission Line will cross Bureau of Land Management (BLM) and Forest Service (FS) lands as provided by the Final Environmental Statement (FES).

The plan and profile drawings for the transmission line will show the exact location of the tranmission line and its associated structures. The plan and profile drawings will be submitted to the BLM or FS for review and comments and shall become a part of this COM Plan by reference. The construction contractor shall have an identical set of drawings.

CONSTRUCTION, OPERATIONS

AND

MAINTENANCE PLAN

1500 KV DC Intermountain-Adelanto Line 1

Transmission Line

INTRODUCTION

The 1500 KV DC Intermountain-Adelanto Line 1, hereafter known as the DC Transmission Line, is required by the Intermountain Power Agency (IPA) to deliver electrical power from the IPP Generation Station located near Delta, Utah, to a HVDC converter station near Victorville, California, where the Southern California participants in IPP will receive their power allocations. Construction of the DC Transmission Line is critical based on its scheduled in-service date to avoid extensive cost impact at the generation station due to delays. This DC Transmission Line will cross Bureau of Land Management (BLM) and Forest Service (FS) lands as provided by the Final Environmental Statement (FES).

The plan and profile drawings for the transmission line will show the exact location of the transmission line and its associated structures. The plan and profile drawings will be submitted to the BLM or FS for review and comments and shall become a part of this CCM Plan by reference. The construction contractor shall have an identical set of drawings.

Detailed drawings will be provided on a line section basis, approximately 15 to 30 miles in length, to the Bureau of Land Management to allow review on a continuing basis and lessen the impact of the BLM being overburdened with large volumes of drawings at one time. Detailed drawings for the FS Lands (Dixie NF) will be submitted at one time.

BACKGROUND

Construction contracts for the DC Transmission Line shall include the required compliance to this Construction, Operations, and Maintenance Plan (COM Plan). The contracts will provide that contractors comply with the provisions set forth in attached Sections 1 - 14.

Major impacts and mitigation measures are contained in Sections 1 - 14. These sections will be included in the construction contracts. This will provide construction contracts that will be compatible with BLM and FS requirements. Major impact areas are summarized below:

1. Culture Resources
2. Ecological
3. Bilogical
4. Wild Fire Protection - See Section 1.
5. Clearing Stipulations - See Section 2.
6. Erosion Control, Revegetation and Restoration Measures - See Section 3.
7. Transportation - See Section 4
8. Visual Resources - See Section 5
9. Flagging - See Section 6
10. Communications - See Section 7
11. Culture Resources - See Section 8
12. Threatened and Endangered Plant and Animals - See Section 9

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10. Communications - See Section 7
11. Culture Resources - See Section 8
12. Threatened and Endangered Plant and Animals - See Section 9

13. Blasting - See Section 10
14. Health and Safety - See Section 11
15. Water Quality - See Section 12
16. Site Prescription - See Section 13
17. Right-of-way Management - See Section 14

Information and data from reports required under the right-of-way grant were used in development of Sections 1 - 14. Any required information and data not presently available will be provided to the BLM/FS when available. It is understood, that no construction work will be initiated on a section of line until all required information has been submitted to the BLM/FS for review and approval, and a Notice to Proceed or Use Permit has been obtained.

1.0 DESIGNATION AND RESPONSIBILITIES OF PROJECT MANAGEMENT OFFICERS

1.1 The DC Transmission Line will be constructed on a team effort basis. Members of the team include the following:

1. The Grant/Permit Holder
2. The BLM
3. The Forest Service
4. State agencies
5. Grant/Permit Holder's Authorized Representative
6. Private property owners
7. Construction Contractors

13. Blasting - See Section 10

14. Health and Safety - See Section 11

15. Water Quality - See Section 12

16. Site Prescription - See Section 13

17. Right-of-way Management - See Section 14

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2. The BLM
3. The Forest Service
4. State agencies
5. Grant/Permit Holder's Authorized Representative
6. Private property owners
7. Construction Contractors

1.2 The Intermountain Power Agency (IPA), as the Grant/ Permit Holder, has selected the Los Angeles Department of Water and Power (LADWP) to provide administration, engineering and construction management of the DC Transmission Line.

1.2.1 The LADWP's Lead Transmission Design Engineer is responsible for the overall transmission line project including engineering and construction and is located in Los Angeles, California, and can be reached at (213) 481-4875. His name will be made available prior to start of construction.

1.2.2 The LADWP's Site Construction Manager has the responsibility of monitoring the work performed by construction contractors and enforcing the requirements of the construction contracts. He will reside in the project area and his, name, address and phone number will be made available prior to start of construction.

1.2.3 A list of construction inspectors will be provided by the Site Construction Manager prior to the start of construction.

1.3 The following employees of the BLM/FS are designated as the Authorized Officers for the project.

1.2 The Intermountain Power Agency (IPA), as the Grant/Permit Holder, has selected the Los Angeles Department of Water and Power (LADWP) to provide administration, engineering and construction management of the DC Transmission Line.

1.2.1 The LADWP's Lead Transmission Design Engineer is responsible for the overall transmission line project including engineering and construction and is located in Los Angeles, California, and can be reached at (213) 481-6975. His name will be made available prior to start of construction.

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1.2.3 A list of construction inspectors will be provided by the Site Construction Manager prior to the start of construction.

1.3 The following employees of the BLM/FS are designated as the Authorized Officers for the project.

1.3.1 Authorized Officer (AO): The AO for this project will have overall responsibility for administering and enforcing the grant/permit provisions, as well as resolving any conflicts that arise relating to IPA's 500 kV DC Adelanto Line 1 Powerline on land administered by BLM/FS. The AO will issue notices to proceed, grant amendments and special use permits. The AO for this project will be:

STATE	NAME	TELEPHONE NUMBER
BLM, Utah:	Donald L. Pendleton	Com. (801) 896-8221
	Richfield District Manager	FTS 584-8011
	Morgan Jensen	
	Cedar City District Manager	Com. (801) 586-2401
USDA FS, Utah:	John V. Lupis	
	Dixie National Forest Supervisor	Com. (801) 586-2421
BLM, Nevada:	Kemp Conn	
	Las Vegas District Manager	Com. (702) 388-6403
BLM, Calif.:	Gerald E. Hillar	
	California Desert District Manager	Com. (714) 351-6386

1.3.2 Field Compliance/Monitoring Officer (FCO): The FCO shall have overall responsibilities for administering and enforcing grant/permit stipula-

1.3.1 Authorized Officer (AO). The AO for this project will have overall responsibility for administering and enforcing the grant/permit provisions, as well as resolving any conflicts that arise relating to IPA's 500 KV DC Adelanto Line 1 Powerline on land administered by BLM/FS. The AO will issue notices to proceed, grant amendments and special use permits. The AO for this project will be:

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	Richfield District Manager	FTS 584-8011
	Morgan Jensen	
	Cedar City District Manager	Com. (801) 586-2401
USDA FS, Utah:	John V. Lopis	
	Dixie National Forest Supervisor	Com (801) 586-2421
BLM, Nevada:	Bemp Conn	
	Las Vegas District Manager	Com. (702) 388-6403
BLM, Calif.:	Gerald E. Hillar	
	California Desert District Manager	Com. (714) 351-6380

1.3.2 Field Compliance/Monitoring Officer (FCO):

The FCO shall have overall responsibilities for administering and enforcing grant/permit stipula-

tions as they relate to the construction and operation of the Adelanto 1 Powerline. Authority is delegated to the FCO for such items as participating in preconstruction work meeting, written stop and/or resume work orders, Temporary Use Permit actions (in Utah and California only), Temporary Special Use Permits, etc. In Nevada, TUP's will be granted by the Las Vegas BLM FCO. The FCO shall be responsible to keep the District Managers and Forest Supervisors informed at all times of the progress and problems relating to the Adelanto 1 Powerline. He may also have a back up assistant with the same authority when on the project. The FCO for this project will be:

NAME	AGENCY	TELEPHONE NO.
Tom Jensen	BLM House Range RA	(801) 743-6811
Mark Bailey	BLM Warm Spring RA	(801) 743-6811
Sheridan Hansen	BLM Beaver River RA	(801) 586-2458
Rance Rollins (Dave Bell, acting)	FS Pine Valley Ranger District	(801) 673-3431
Frank Rowley	BLM Dixie Resource Area	(801) 673-4654
Robert Nauert	BLM Las Vegas Disctrict	(702) 388-6403
Everill Hayes (Gary Ryan, altenate)	BLM Needles RA	(619) 326-3896

1.3.3 Project Inspector (PI)

The PI will be the individual responsible for the on-the-ground administration of the provisions of

tions as they relate to the construction and operation of the Adelanto I Powerline. Authority is delegated to the FCO for such items as participating in preconstruction work meeting, written stop and/or resume work orders, Temporary Use Permit actions (in Utah and California only), Temporary Special Use Permits, etc. In Nevada, TUP's will be granted by the Las Vegas BLM FCO. The FCO shall be responsible to keep the District Managers and Forest Supervisors informed at all times of the progress and problems relating to the Adelanto I Powerline. He may also have a back up assistant with the same authority when on the project. The FCO for this project will be:

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Robert Nauert	BLM Las Vegas District	(702) 384-0408
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1.3.3 Project Inspector (PI)

The PI will be the individual responsible for the on-the-ground administration of the provisions of

the grants/permits and stipulations. The granting of Temporary Special Use Permits requires the authorization of the FCO. The PI is granted authority to verbally issue a stop work order for up to 24 hours due to noncompliance, weather, emergencies, etc., providing the Holder's field representative is contacted prior to any shutdowns. Upon issuing a verbal stop-work order, the FCO should be notified immediately and will issue written orders as to the reason for the stop and the corrective action that will be taken. It will be the PI's responsibility to keep the FCO informed at all times of the progress, problems and concerns relating to the powerline. The PIs for this project will be:

NAME	AGENCY	TELEPHONE NO.
Gerald Muhlestein	BLM Warm Springs and House Range RA	(801) 743-6811
Lou Bechtold	BLM Cedar City D. O.	(801) 586-2401
Rich Evans	FS Cedat City S. O.	(801) 586-2421
Pat Hall	BLM Las Vegas D. O.	(702) ~~533~~ 388-6627
Ron Morrison (Gary Ryan, alternate)	BLM Needles R. A.	(619) 236-3896

1.4 Personnel Interfaces

1.4.1 The Project Inspector shall be issued a mobile radio and will coordinate his efforts and work through the Site Construction Manager.

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Ron Morrison (Gary Ryan, alternate)	BLM Needles R. A.	(619) 236-3896

1.4 Personnel Interfaces

1.4.1 The Project Inspector shall be issued a mobile radio and will coordinate his efforts and work through the Site Construction Manager.

1.4.2 In case the Project Inspector is not able to contact the Site Construction Manager, he may communicate with a construction inspector as indicated above in 1.2.3.

1.4.3 BLM/FS communication which results in change or action required to improve compliance or non-compliance to requirements should be made in writing to the Site Construction Manager upon the Site Construction Manager's request. The Site Construction Manager shall make distribution of written notifications no later than five days after the communication initiating the change or new action.

1.4.4 Notification of changes in LADWP's assigned personnel shall be made in writing, in advance, to the Authorized Officer.

1.4.5 All communications from the Authorized Officer will be received by the Site Construction Manager except as provided for in 1.4.2.

1.4.6 Suspension of work is covered in the construction contracts and in provisions included in Sections 1-14 herein. Only suspensions resulting from Wild Fire measures, and non-compliance of this

1.4.2 In case the Project Inspector is not able to contact the Site Construction Manager, he may communicate with a construction inspector as indicated above in 1.2.3.

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1.4.4 Notification of changes in LADWP's assigned personnel shall be made in writing, in advance, to the Authorized Officer.

1.4.5 All communications from the Authorized Officer will be received by the Site Construction Manager except as provided for in 1.4.2.

1.4.6 Suspension of work is covered in the construction contracts and in provisions included in Sections I-14 herein. Only suspensions resulting from Wild Fire measures, and non-compliance of this

plan are discussed. Other causes for suspension will appear in the construction contracts, but their use shall rest solely with the Grant/Permit Holder.

1.4.7 Contractor compliance with the COM Plan will be achieved through administration of the construction contracts. BLM/FS requirements have been included in Sections 1-14 of this plan as they will appear in the final contracts, except that revisions can be made, if necessary, to reflect changing conditions.

1.4.7.1 Changes required by the Authorized Officer shall be verbally communicated only to the Site Construction Manager, and documentation of the requirement shall be sent to the Site Construction Manager and Lead Design Engineer no later than five days after verbal communication.

1.4.7.2 LADWP may request changes by making recommendations in writings to the Authorized Officer. If concurred in writing by the BLM/FS, an amendment to the construction contract and COM Plan will be issued accordingly by LADWP.

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1.4.7.2 LADWP may request changes by making recommendations in writing to the Authorized Officer. If concurred in writing by the BLM/FS, an amendment to the construction contract and COM Plan will be issued accordingly by LADWP.

1.4.7.3 LADWP, through its Site Construction Manager will be responsible for enforcing contract requirments. To this end, provisions will be made in the contracts for suspension of work in whole or in part, correction of faulty work by the contractor or others, if necessary, and provisions for back charges to the contractor when necessary.

1.4.7.4 Amendments to the COM Plan shall be completed and distributed by LADWP to all concerned parties within 20 days of acceptance by the District Manager or Forest Supervisor.

1.5 Preconstruction Conference

Preconstruction conferences between the Grant/Permit Holder's Construction Manager, BLM/FS and construction contractors shall be held to discuss coordination and requirement procedures.

1.5.1 Pre-Construction conferences shall be arranged for by the Construction Manager; however, the BLM/FS may request such conferences.

1.4.7.3 LADWP, through its Site Construction Manager will be responsible for enforcing contract requirements. To this end, provisions will be made in the contracts for suspension of work in whole or in part, correction of faulty work by the contractor or others, if necessary, and provisions for back charges to the contractor when necessary.

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1.5.1 Pre-Construction conferences shall be arranged for by the Construction Manager; however, the BLM/FS may request such conferences.

1.5.2 The Construction Manager shall be responsible for preparing minutes of pre-construction conferences.

1.6 Site Prescription

A Tower Site Prescription form is included in Section 13 of this Construction, Operations, and Maintenance Plan. It may be revised to satisfy changing conditions.

1.6.1 The Tower Site Prescription form shall be prepared by authorized representatives of the BLM/FS and Grant/Permit Holder. Preparation is based on a team work approach.

1.6.2 Copies of the approved Tower Site Prescription form shall be provided to the construction contractors.

1.6.3 Should all Site Prescription forms not be completed at the time application is made for the Notice to Proceed/Special Use Permit, these sites not completed will be excepted in the Notice to Proceed/Special Use Permit. Every effort will be made by the Authorized Officer and the Construction Manager to complete Site Prescription forms and issue necessary amendments to preclude construction slowdowns or work stoppages. Notice to Proceed/Special Use Permit exceptions will

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list sites where work cannot be initiated, until completion and approval of corresponding Site Prescription forms.

2.0 CONSTRUCTION

2.1 Project Description

The DC Transmission Line will be constructed using lattice steel self-supporting towers. The foundations will typically be concrete cylinder type depending on existing soil conditions. The line will be a bipole ±500KV DC transmission line. The location of the line is generally defined as starting from a point approximately nine miles North of Delta, Utah, and transversing westerly and southerly through Utah (including 21 miles through Dixie NF), Nevada, and California with a termination at Adelanto, California (located 7 miles west of Victorville, California).

2.1.1 The right-of-way width applied for will be 200 feet wide and approximately 490 miles long.

2.1.2 This line will cross railroads, highways, rivers, irrigation canals, country roads, transmission lines, pipe lines and communication cables. These crossings will be shown on the plan and profile drawings.

list sites where work cannot be initiated, until completion and approval of corresponding site prescription forms.

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2.1.3 The following maps and drawings have been utilized in development of this construction, operation and maintenance plan:

USBLM Surface Management Quads

Aerial Photography 1" = 1000'.

Plan and Profile 1" = 200'.

USGS 7.5 and 15 minutes series topographic maps.

USGS 1:125,000 (1" = 4 mi.) topographic maps.

2.1.4 The plan and profile drawings will be submitted to the BLM/FS for review and comment. These drawings shall be submitted on a line section basis.

2.2 Access

2.2.1 Plans for access road construction, both temporary and permanent, will be prepared and submitted to the BLM/FS for review and comment. The access road plans and details will be incorporated in the construction contract. Any additional access roads that may be required will be requested in writing to the BLM/FS. All access roads will be shown on the plan and profile and will require approval by the Authorized Officer.

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Access roads will be required for construction and maintenance of the line. Construction of access roads is covered in Section 4. Closure of designated roads is described in Section 3.

2.2.2 The proposed DC Transmission Line will require new road construction including clearing, grading, and surfacing. The tower sites and the Right-Of-Way will generally be accessed using new roads. Construction crews will use existing and new access roads to access and travel transmission line right-of-way (See Section 2.2.1 above). In certain areas specifically designated by the BLM/FS, overland paths shall be used for access to tower sites.

2.2.3 Overland paths require no additional improvements. Existing roads are defined as any road on public or national forest lands which can be used for public vehicle transport. New road construction is defined as the building of a new road in new location. Upgrading of an existing road is defined as roads to be improved. Sections 3 and 4 specify detailed requirements.

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2.2.4 After construction is complete, the overland paths not required for continuing line maintenance will be abandoned and rehabilitated as directed by the Authorized Officer. (See Section 3 for Closure of Designated Roads).

2.2.5 Existing roads will be restored to their original or better condition as directed by the Authorized Officer. (See Section 4.)

2.2.6 No grading or stripping will be permitted without prior approval of the Authorized Officer. Grading may be required where existing roads need repair, where steep side slopes occur and at existing drainages and washes. Such areas will be rehabilitated. (See Section 3.)

2.2.7 Where access and/or terrain, habitat or other conditions preclude the use of conventional methods, the Authorized Officer will require the use of helicopters to haul in material and erect towers and string conductors.

2.2.8 For new access needs outside of the transmission line right-of-way, the Grant/Permit Holder shall apply to the BLM/FS for special use permits, temporary use permits or right-of-way grants; if

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applications are approved, the BLM/FS shall issue the appropriate permits or grants. Changes to existing permits and grants for roads outside of the transmission line right-of-way shall be done by amendment, after approval by the BLM/FS. The BLM/FS shall issue special use permits, temporary use permits or grants as well as amendments to these documents. The Grant/Permit Holder shall revise the COM Plan Transportation Section accordingly and notify the Contractor of the revisions.

2.2.9 Should additional access or change in access be required that does not comply with the Plan for the transmission line right-of-way, the Grant/Permit Holder shall request an amendment to the special use permit or notice to proceed.

2.3 Excavation and Clearing

2.3.1 Clearing

Clearing will be done only in those areas necessary to construct and install tower foundations, structures, conductors, hardware, and access roads. Clipping and crushing of brush and trees less than 6 inches diameter at breast height (DBH), rather than uprooting, will be the preferred construction method for clearing.

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Trees over 6 inches in diameter will be cut and stockpiled.

Marketable timber, which is defined as trees 6 inches DBH and larger, will be stockpiled as directed by the Authorized Officer. The BLM/FS will be reimbursed by the Grant/Permit Holder for all marketable trees and vegetation cut, injured or destroyed in the construction of the transmission line, access roads, or other facilities at current applicable rates to the sale. The contractors will collect, remove and dispose of such trees and vegetation as directed by the BLM/FS authorized officer. Clearing requirements are detailed in Section 2.

2.3.2 Topsoil Storage

Topsoil removed prior to excavation will be stockpiled adjacent to the construction sites or access roads in a manner specified by the Authorized Officer and the Site Construction Manager. Actions beneficial to the restoration process will be considered. All procedures and operations will reflect a sound approach to the environment and erosion control. (See Section 3 for detailed erosion control, revegetation and restoration requirements.)

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2.3.3 Excess earth material will be scattered around each construction site and backfilling operation associated with restoration, (See Section 3). The BLM/FS may require the removal of excess earth material to sites outside the right-of-way.

2.3.4 Excavation and grading will be limited to only that which is necessary for the construction of foundations, tower assembly and erection, transportation of project materials and components. Excavation will be accomplished using construction equipment such as graders, dozers, augers, and vehicles. The construction contracts will describe excavation activities in more detail.

2.3.5 Equipment Staging and Storage Yards

Each construction contractor will require temporary yards for equipment staging and material storage. In any instance that BLM/FS lands are required, the Grant/Permit Holder will be responsible for obtaining the necessary permits. Permits will be issued in the name of the Grant/Permit Holder.

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2.3.6 Each tower site will become a small staging area as materials for foundations, towers and insulator assemblies are delivered to and installed at each tower site. The construction contracts shall require the site to be restored to near its original state.

2.4 Hauling of Equipment and Construction Material

2.4.1 Construction materials and equipment will be delivered to various job sites via trailers, trucks, and other vehicles which are compatible to the specific items being delivered, the contractor's operations, and the type of terrain being traversed. Transportation is described in detail in Section 4.

2.5 Framing and Erection of Structures

2.5.1 The DC Transmission Line will be installed using cylinder type concrete foundations with augered holes for same.

2.5.2 Grading, leveling, squaring, backfilling, and anchoring will be part of this operation with excess material scattered around the structure or as directed by the Construction Manager and approved by the Authorized Officer. Grading will also be required in order to provide level

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surfaces for crane operation for the erection of structures. Restoration of these areas will be done as directed by the Authorized Officer. (For revegetation details see Section 3.)

2.5.3 Mobile cranes will be used to erect structures. These structures may be partially shop assembled and then hauled to the tower site by trucks or other compatible vehicles.

2.5.4 Fabrication of components may be done away from the tower sites. Assembly of the components will be done at the tower sites by field bolting and attached to the foundations with anchor bolts.

2.6 Stringing and Sagging

2.6.1 Prior to pulling conductors and static wires, insulator strings and stringing blocks will be attached to the towers (For conductor set-up approvals, see Section 2).

2.6.2 A lead line is pulled through the stringing blocks for the entire length of the conductor pull, usually two to three miles. This lead line is attached to a steel line which is, in turn, attached to the conductors. The steel line is pulled by a drum puller located at the far end of

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the pull section. Pulling and stringing methods will be approved by the Authorized Officer and may require the use of a helicopter.

2.6.3 To avoid contact between the ground and the conductors, a power operated tensioning machine is used which maintains a constant tension on the conductors. The conductors and shield wires are pulled up to the proper sag and then secured.

2.6.4 Temporary use permits will be applied for by the Grant/Permit Holder for conductor pull areas, if they occur outside the transmission right-of-way. If applications are approved, permits will define access and restoration requirements and measures. A site prescription form shall be required for pull areas within the transmission line right-of-way.

2.7 Clipping

After the sagging operation is complete, clipping occurs when the conductors are removed from the stringing blocks and permanently attached to the insulator strings by means of suspension clamps.

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2.8 Spacing

After the clipping operation is complete, spacers are placed between the three subconductors to prevent damage under wind conditions. A spacer cart is used to place spacers at predetermined locations between structures.

2.9 Counterpoise

The Construction Manager will determine the location and the configuration of the counterpoise through field testing following tower erection. The BLM/FS and the Construction Manager will revise the Tower Site Prescription forms, if counterpoise is required, in order to limit the disturbance of the natural resources to the least extent possible. Any installation restrictions will be included in the revised site prescription forms.

2.10 Cleanup and Restoration

2.10.1 Debris, litter and waste other than excess materials to be used in restoration will be controlled and removed on a continuing basis as directed by the Authorized Officer.

2.10.2 Road access crossings of fence lines will have gates or cattle guards installed prior to construction. After construction of the lines, these gates will be secured and fences properly

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tensioned where they have been cut. Metal gates and cattleguards are specified in detail in Section 4.

2.10.3 New access roads not needed for maintenance will be restored. As directed by the Authorized Officer, areas disturbed will be smoothed, revegetated in areas where vegetation had been removed or killed, and all debris and litter removed. All restoration work will be done in a manner that will be compatible to surrounding conditions and be beneficial to erosion control (See Section 3).

2.10.4 Work sites as requested by the Authorized Officer will be restored using excess materials, vegetation, and topsoil that has been stockpiled for this purpose. Excess slash, soil materials, rock and other objectionable materials that cannot be used in restoration work, will be disposed of by the construction contractor as directed by the Authorized Officer.

2.10.5 In order to mitigate electric shock, permanent, large, metal structures near the line will be grounded. Fences that cross the right-of-way perpendicular to the line will be grounded at

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each edge of the right-of-way. Fences that parallel the line will be grounded at intermittent intervals. The procedure for grounding will be specified in the construction contract. The Site Construction Manager will authorized additional grounding, as required, during the construction process.

2.10.6 Cleanup work in general will include the removal of all materials that are not natural to the surroundings and cannot be used in restoration of all the disturbed areas. All restoration and revegetation work will be done in accordance with Section 3.

2.11 Maintenance

2.10.1 The environmental guidelines found in "Environmental Criteria for Electrical Transmission Systems", published by the United States Department of Agriculture (USDA) and the Department of Interior (USDI), and "Electric Power Transmission and the Environment" published by the Federal Power Commission (now Department of Energy) will be followed in the Transmission Line Maintenance procedures. The maintenance plan is included in Section 14 and will not appear in the Construction Contract.

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2.11.2 The DC Transmission Line will be patroled periodically by fixed-wing aircraft, helicopter, ground vehicle or on foot. Line maintenance will vary from routine inspections to emergency repairs required to restore line service.

2.11.3 Maintenance crews will trim trees and vegetation where necessary to prevent accidental grounding contact with the conductors. Should the use of herbicides be necessary, only USDA recommended and EPA approved herbicides will be used. In most areas accepted standard utility practices such as repeated tree trimming and brush removal will be followed to maintain the right-of-way. These activities will require approval from the Authorized Officer prior to their initiation.

2.11.4 Equipment required for maintenance of the transmission line is dependent on the type of maintenance required. Routine line inspection would require the use of a 4-wheel drive vehicle only. Storm damage might require the same types of equipment used during construction. This type of equipment could include: power augers for the hole boring, backhoes for escavation, concrete trucks, vehicles with power booms and/or cranes for structure erection, power tensioners and

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2.11.5 Where access and/or terrain, habitat or other conditions preclude the use of conventional methods, the Authorized Officer will require the use of helicopters to haul material and erect towers and string conductor.

3.0 USE PERMITS

It is intended that all use permits be specified in construction contracts, if possible. We recognize that changes do occur that are cost effective and in some cases decrease damage to the right-of-way or to other concerns. Most of these anticipated changes have been included in Sections 1-14. The Grant/Permit Holder should allow at least 30 days, preferably 60 days, to process temporary use permits. The following approach to the major concerns of the BLM/FS will generally be used:

3.1 Access Roads

Should additional access or changes in access be required that do not comply with the previously approved plans, the Construction Manager will request a new or amended use permit thereto and provide the detailed information for the change. When approved by the

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Authorized Officer, the contractor will be notified to make the change and the access road plan will be revised accordingly. Access roads are addressed in Section 4.

3.1.1 On lands administered by the FS, the following access road permit procedures will apply.

Access road needs (both temporary and permanent) for areas <u>within and outside of the transmission line right-of-way, that are not part of an existing or proposed FS road system</u>, will be applied for by the Grant/Permit Holder under the transmission line special use permit. Applications for new road construction, that will be made part of the FS road system, will be processed under a special use road permit procedure; i.e., Class E Special Use Road Permit.

Where, the Grant/Permit Holder is proposing upgrading (including minor alignment changes) of <u>existing</u> FS system roads, the Grant/Permit Holder will apply for a Road Use Permit.

3.2 <u>Borrow Areas</u>

The need for borrow areas is anticipated on the DC Transmission Line. A use permit or materials sale will be requested by the contractor through the Construction

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3.2 Borrow Areas

The need for borrow areas is anticipated on the DC Transmission line. A use permit or materials sale will be requested by the contractor through the construction

Manager. The contractor will provide detailed information and reasons for such a request.

3.3 Staging Areas

Material storage yards for transmission line materials will be required. These yards may be located on private property and thus not affect the BLM/FS. Should the contractor require a material yard on BLM/FS property, he will make his request for a use permit through the Construction Manager. If the Construction Manager approves of the request, he will apply to the BLM/FS for a permit; if the application is approved, BLM/FS shall issue a permit for the staging area.

3.4 Heliports

It is not anticipated that Heliports will be required on the DC Transmission Line. However, should they be necessary, application for a use permit will be made by the Construction Manager well in advance of its requirement. If the application is approved, BLM/FS shall issue a permit for the heliport.

3.5 Construction Camp

No construction camps will be required.

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3.5 Construction Camp

No construction camps will be required.

3.6 Batch Plants

Use of concrete batch plants will be required on the DC Transmission Line. Should the contractor require a batch plant on BLM/FS property, he will make his request for a use permit through the Construction Manager. The Construction Manager will apply to the BLM/FS for a permit; if the application is approved, BLM/FS shall issue a permit.

3.7 Parking Lots

The Construction Manager and contractor will establish field offices for the project. Should the contractor desire to use BLM/FS Land or right-of-way for parking, he shall make his request to the Construction Manager, and if the Construction Manager approves, he will formally make application for a use permit on behalf of the contractor. Should the Construction Manager desire to use BLM/FS Land or right-of-way for parking, he will formally make application for a use permit. If the application is approved, BLM/FS shall issue a permit for the parking lot.

3.8 Additional construction areas outside BLM/FS right-of-way may include, but are not necessarily restricted to, the following:

3.8.1 Local and private test laboratories.

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3.8 Additional construction areas outside BLM/FS right-of-way may include, but are not necessarily restricted to, the following:

3.8.1 Local and private test laboratories

3.8.2 Reinforcement steel prefabrication in the material yard or at a local private plant.

3.8.3 Commerical concrete plants.

3.8.4 Local and private fence and gate suppliers.

3.8.5 Local gas and repair facilities.

3.8.6 Refabrication of damaged steel at private facilities.

4.0 SITE SPECIFIC PRACTICES AND MITIGATION MEASURES

4.1 These measures are presented in Sections 1-14 in the manner in which they should be included in the construction contract. If the original construction contract omits any necessary requirements, they will be incorporated by change order into the contract.

4.1.1 The contractor will not conduct any activities within the transmission line right-of-way prior to notification by the Construction Manager that either a Notice to Proceed or temporary use permit has been issued by the BLM or the proper permits issued by the Forest Service.

3.8.2 Reinforcement steel prefabrication in the material yard or at a local private plant.

3.8.3 Commercial concrete plants.

3.8.4 Local and private fence and gate suppliers.

3.8.5 Local gas and repair facilities.

3.8.6 Rehabilitation of damaged steel at private facilities.

4.0 SITE SPECIFIC PRACTICES AND MITIGATION MEASURES

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4.2 Threatened and Endangered Plants and Animals

A list of threatened and endangered plant and animal species in the vicinity of the right-of-way of the DC Transmission Line will be presented at a later date as Exhibits 3 and 4 in Appendix A. This subject is covered in Section 9.

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 1

WILD FIRE PROTECTION

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND
MAINTENANCE PLAN

SECTION 1

WILD FIRE PROTECTION
DC TRANSMISSION LINE

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CONSTRUCTION, OPERATIONS AND
MAINTENANCE PLAN

SECTION I

WILD FIRE PROTECTION
DC TRANSMISSION LINE

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CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 1

WILD FIRE PROTECTION

DC TRANSMISSION LINE

1.0 PURPOSE

To provide responsibilities for prevention, presuppression, and suppression of fires during the construction of the DC Transmission Line and to define minimum requirements that shall be included in all construction contracts for precautions on wild fire protection.

2.0 OBJECTIVE

To prevent project-related, man-caused, and machine-caused wild fires within the project area and to cause prompt, aggressive action to all wild fires within the project area.

3.0 RESPONSIBILITY

The Contractor shall be responsible for and implement the following action plan commensurate to the extent needed.

3.1 Initiate and implement all fire control activities on the project until relieved by the Authorized Officer.

3.2 Comply with state, county, and Federal laws, ordinances, rules and regulations which pertain to prevention, presuppression and suppression of fire activities.

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

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WILD FIRE PROTECTION

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3.0 RESPONSIBILITY

The contractor shall be responsible for and implement the following action plan commensurate to the extent needed.

3.1 Initiate and implement all fire control activities on the project until relieved by the Authorized Officer.

3.2 Comply with state, county, and federal laws, ordinances, rules and regulations which pertain to prevention, presuppression and suppression of fire activities.

3.3 Appoint a Fire Control Representative who shall accompany the Site Construction Manager and the Authorized Officer on fire inspections and shall take corrective action when notified that fire protection requirements are not in compliance.

3.4 Prepare to stop all construction activities or construction operations or to reduce operations which pose a fire hazard until appropriate safeguards are taken. When extreme fire danger is present and the Contractor receives notification from the Site Construction Manager, the Contractor shall discontinue all work or portions thereof as directed.

The Authorized Officer may direct the Site Construction Manager to discontinue work or portions thereof. These directions or directives shall be given to the Contractor, and the Contractor shall cause the directives to be carried out.

3.5 Immediately alert the available project crews and the Site Construction Manager when a fire occurs within the project area. The project tools, equipment, and manpower shall be sent immediately to control the fire. The Site Construction Manager shall be responsible for immediately notifying the Authorized Officer of the fire, its location, and corrective action taken.

3.5 Appoint a Fire Control Representative who shall accompany the Site Construction Manager and the Authorized Officer on fire inspections and shall take corrective action when notified that fire protection requirements are not in compliance.

3.6 Prepare to stop all construction activities or construction operations or to reduce operations which pose a fire hazard until appropriate safeguards are taken. When extreme fire danger is present and the Contractor receives notification from the Site Construction Manager, the Contractor shall discontinue all work or portions thereof as directed.

The Authorized Officer may direct the Site Construction Manager to discontinue work or portions thereof. These directions or directives shall be given to the Contractor, and the Contractor shall cause the directives to be carried out.

3.7 Immediately alert the available project crews and the Site Construction Manager when a fire occurs within the project area. The project tools, equipment, and manpower shall be sent immediately to control the fire. The Site Construction Manager shall be responsible for immediately notifying the Authorized Officer of the fire, its location, and corrective action taken.

3.6 Notification of a fire shall be made in accordance with the following list. (This information is to be provided before construction is initiated.)

Name	Day	Night
Site Construction Manager with Emergency Caches	(801) 586-1150	(801) 586-4540
Authorized Officer Richfield BLM D.O. Fire Dispatch	(801) 896-8404	Same
Fillmore BLM Fire Dispatch	(801) 896-8404	Same
Cedar City BLM Fire Dispatch	(801) 586-7021	Same
Authorized Officer Dixie NF Supervisor's Office Cedar City Fire Dispatch	(801) 586-4215	(801) 586-4215 (801) 628-0618
Las Vegas BLM Fire Dispatch	(702) 646-2211	Same
Riverside BLM Fire Dispatch	(619) 351-6382	Same
Needles BLM	(619) 351-6374	Same
Fire Dispatch	(619) 326-3896	Same
Contractor's Fire Control Representative	(Northern half) (801) 387-2428 (Southern half) (702) 399-2600	

4.0 NOTIFICATION

Site Construction Manager will designate a field representative who will be responsible for notifying the Authorized Officer. Written notification will be made by the Site Construction Manager.

3.8 Notification of a fire shall be made in accordance with the following list. (This information is to be provided before construction is initiated.)

Name	Day	Night
Site Construction Manager with Emergency Caches	(801) 586-1150	(801) 586-4540
Authorized Officer Richfield BLM D.O. Fire Dispatch	(801) 896-8404	Same
Fillmore BLM Fire Dispatch	(801) 896-8404	Same
Cedar City BLM Fire Dispatch	(801) 586-7021	Same
Authorized Officer Dixie NF Supervisor's office Cedar City Fire Dispatch	(801) 586-4215	(801) 586-4215 (801) 624-0613
Las Vegas BLM Fire Dispatch	(702) 646-2211	Same
Riverside BLM Fire Dispatch	(619) 351-6342	Same
Needles BLM Fire Dispatch	(619) 351-6174 (619) 326-3896	Same Same
Contractor's Fire Control Representative	(Northern half) (801) 587-2428 (Southern half) (702) 399-2600	

4.0 NOTIFICATION

Site Construction Manager will designate a field representative who will be responsible for notifying the Authorized Officer. Written notification will be made by the Site Construction Manager.

The Contractor shall also designate a fire control representative whose duties will be incorporated in the construction contract.

4.1 The Grant/Permit Holder will be responsible for any fire started by any Grant/Permit employee or contractor in or out of the project area during construction. The contractor will be responsible for any fire started by his employees or operations; the contractor will be responsible for suppression and rehabilitation.

5.0 AUTHORIZED OFFICER

5.1 The Authorized Officer will be responsible for all fire control activities in his administrative unit. He will discuss fire protection stipulations with the Site Construction Manager concerning action to be taken and will notify the Site Construction Manager in writing, when fire conditions warrant implementation of changes in fire plans.

5.2 The Authorized Officer will designate his on-the-job representative and notify the Site Construction Manager in writing.

6.0 ORGANIZATION FLOW CHART

6.1 The responsibility and documentation flow chart shows the organization of the wild fire program.

The Contractor shall also designate a fire control representative whose duties will be incorporated in the construction contract.

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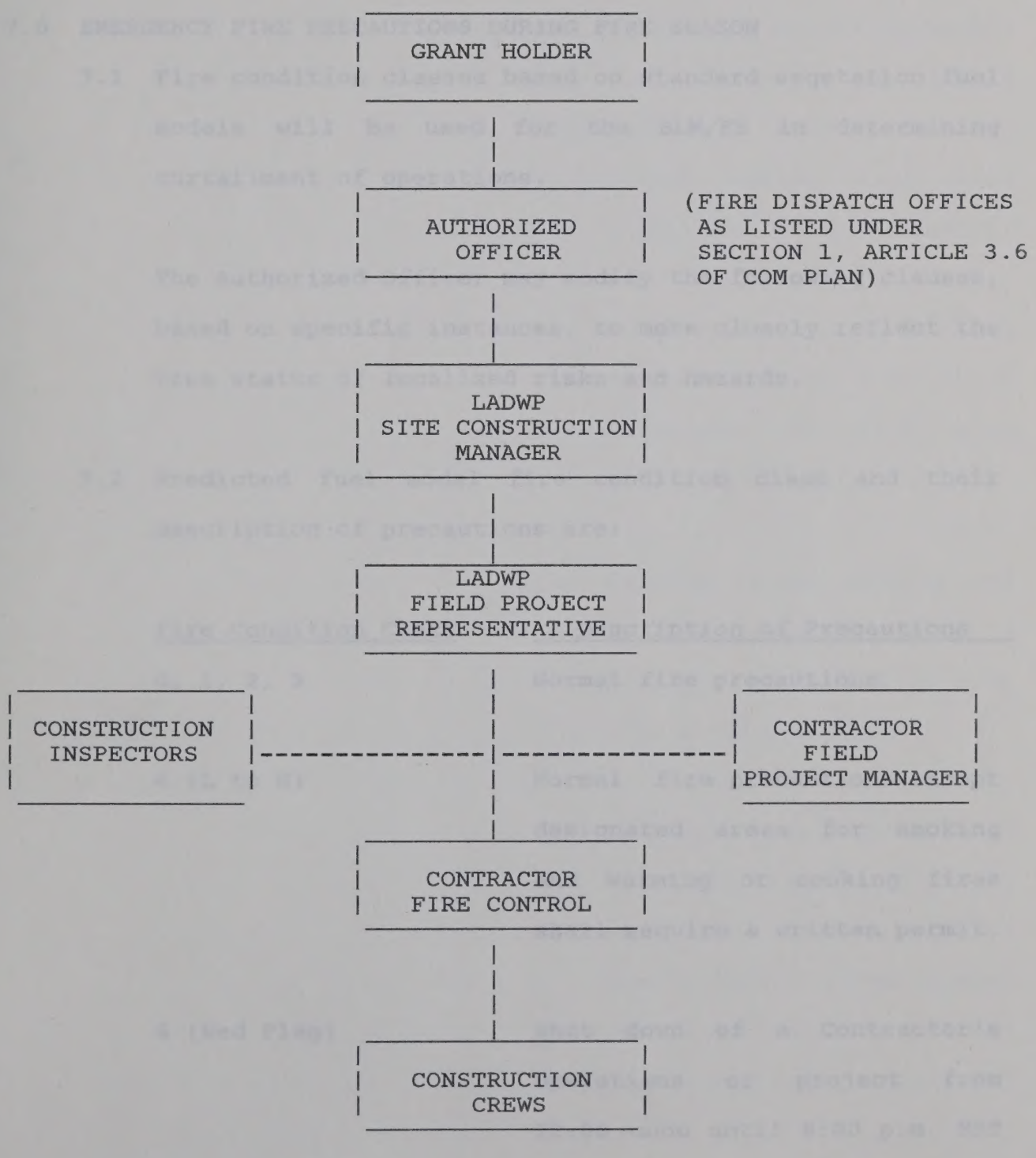
5.2 The Authorized Officer will designate his on-the-job representative and notify the site Construction Manager in writing.

6.0 ORGANIZATION FLOW CHART

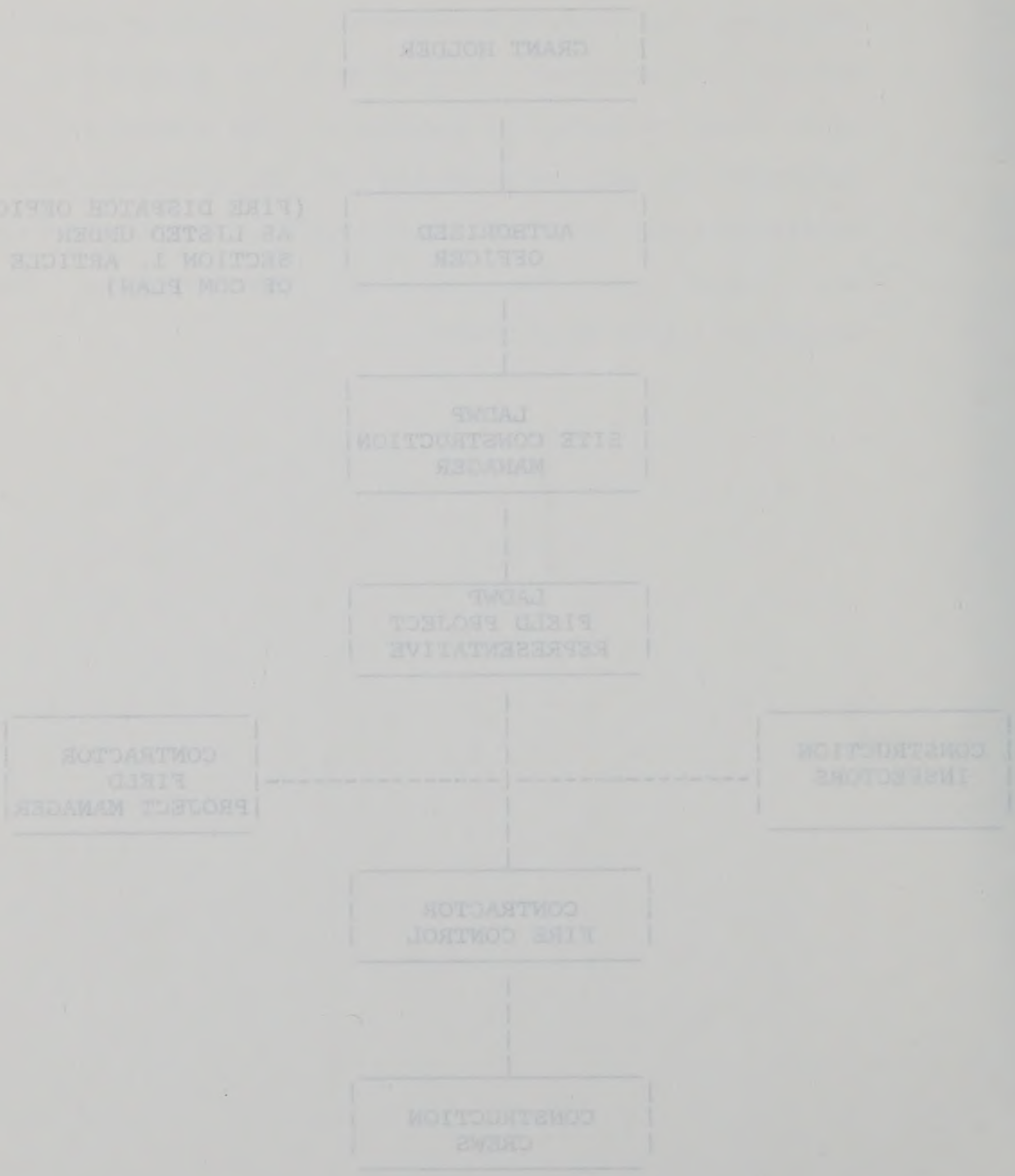
6.1 The responsibility and documentation flow chart shows the organization of the wild fire program.

6.2 Directories will be prepared which will include the Construction Manager, Contractor(s), and BLM/FS personnel immediately concerned with the project. The directories will show names, company names, titles, addresses, and telephone numbers. Directories shall be updated as required. Copies will be distributed as shown under Article 3.6 Section 1. The copies will be submitted to all participants in the preconstruction conference(s). (See Introduction 1.5). The directories are based on the enclosed Documentation and Responsibilities Flow Chart.

±500-kV DC INTERMOUNTAIN-ADELANTO TRANSMISSION LINE 1 WILDFIRE PREVENTION DOCUMENTATION AND RESPONSIBILITY FLOW CHART



1500-KV DC INTERMOUNTAIN-ADELANTO TRANSMISSION LINE I WILDFIRE PREVENTION DOCUMENTATION AND RESPONSIBILITY FLOW CHART



6.3 The Contractor shall furnish a current list of employees and equipment used on the project to the Construction Manager when requested.

7.0 EMERGENCY FIRE PRECAUTIONS DURING FIRE SEASON

7.1 Fire condition classes based on standard vegetation fuel models will be used for the BLM/FS in determining curtailment of operations.

The Authorized Officer may modify the following clauses, based on specific instances, to more closely reflect the true status of localized risks and hazards.

7.2 Predicted fuel model fire condition class and their description of precautions are:

Fire Condition Class	Description of Precautions
0, 1, 2, 3	Normal fire precautions
4 (L to H)	Normal fire precautions except designated areas for smoking and warming or cooking fires shall require a written permit.
4 (Red Flag)	Shut down of a Contractor's operations or project from 12:00 noon until 8:00 p.m. MST (1:00 p.m. to 9:00 p.m. MDT).

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Fire Condition Class	Description of Precautions
0, 1, 2, 3	Normal fire precautions
4 (L to H)	Normal fire precautions except designated areas for smoking and warming or cooking fires shall require a written permit.
5 (Red Flag)	Shut down of a Contractor's operations or project from 12:00 noon until 8:00 p.m. MST (1:00 p.m. to 9:00 p.m. MDT).

Fire Condition Class	Description of Precautions
	All machine treatment of slash, skidding, yarding (if required), blasting, welding, metal cutting and off-loading on the right-of-way is subject to BLM/FS requirements. No smoking, warming or cooking fires shall be permitted. In addition: (1) Power saws shall be shut down from 9:00 a.m. until 8:00 p.m. MST (10:00 a.m. to 9:00 p.m. MDT). (2) Hauling trucks must be out of the project area to a surfaced road by 2:00 p.m. MST (3:00 p.m. MDT). (3) Operations on mineral soil involving road excavation, watering, grading (mineral soil) and/or other equipment maintenance (except refueling) may continue.

Fire Condition Class	Description of Precautions
	All machine treatment of slash, skidding, yarding (if required), blasting, welding, metal cutting and off-loading on the right-of-way is subject to BLM/ES requirements. No smoking, warming or cooking fires shall be permitted. In addition:
	(1) Power saws shall be shut down from 7:00 a.m. until 8:00 p.m. MST (10:00 a.m. to 9:00 p.m. MDT).
	(2) Hauling trucks must be out of the project area to a surfaced road by 2:00 p.m MST (3:00 p.m. MDT).
	(3) Operations on mineral soil involving road excavation, watering, grading (mineral soil) and/or other equipment maintenance (except refueling) may continue.

Fire Condition Class	Description of Precautions
5 (Red Flag)	Shut down all operations except operations on mineral soil involving road excavation, water ing, and grading (mineral soil).
	Gravel surfacing may continue with special permit. The Site Construction Manager may restrict or shut down work on private property at his discretion during a Class 4 or Class 5 fire precaution period.
Area Closures	Total shutdown of all operations and areas closed by entry.

7.2.1 The responsible land management agency shall notify the Site Construction Manager each day of operation when there is a predicted change in fire precaution plans. This notification will be made between 3:00 p.m. and 6:00 p.m. MST (4:00 p.m. and 7:00 p.m. MDT) and will specify the numerical fire manning class to be followed the next day within the local operating areas. The Site Construction Manager shall notify the Contractor immediately; confirm such notifica-

Fire Condition Class	Description of Precautions
5 (Red Flag)	Shut down all operations except operations on mineral soil involving road excavation, watering, and grading (mineral soil). Gravel surfacing may continue with special permit. The Site Construction Manager may restrict or shut down work on private property at his discretion during a Class 4 or Class 5 fire precaution period.
Area Closures	Total shutdown of all operations and areas closed to entry.

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tion, in writing, to the Contractor; and make distribution thereof in accordance with Article 3.6, Section 1.

7.2.2 The responsible land management agency shall, no later than 9:00 a.m. MST (10:00 a.m. MDT), on the following day, advise the Site Construction Manager of a change in the emergency fire precaution schedule. The Site Construction Manager shall notify the Contractor's Fire Control Representative immediately. Such notification shall be confirmed, in writing, by the Site Construction Manager with copies distributed in accordance with Article 3.6 Section 1.

8.0 SPECIFIC FIRE PRECAUTIONARY MEASURES DURING FIRE SEASON

Fire prevention consists of the following requirements.

8.1 Burning

The Grant/Permit Holder shall obtain permits for burning and include, in the permit application, any special provisions pertinent to the particular job. A copy of all permits shall be provided to the Site Construction Manager. This provision shall include right-of-way clearing, and all cleanup, including trash and debris.

tion, in writing, to the contractor; and make distribution thereof in accordance with Article 3.6, Section 1.

7.2.2 The responsible land management agency shall, no later than 9:00 a.m. MST (10:00 a.m. MDT), on the following day, advise the Site Construction Manager of a change in the emergency fire precaution schedule. The Site Construction Manager shall notify the contractor's Fire Control Representative immediately. Such notification shall be confirmed, in writing, by the Site Construction Manager with copies distributed in accordance with Article 3.6 Section 1.

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8.2 Blasting

8.2.1 When blasting is required for construction of access roads and foundations or any excavation, the Contractor shall use electric blasting caps only. During periods when Fire Manning Class 4 is in effect, the Contractor shall have a Fire Prevention Representative present at the site, who shall remain on duty for at least one hour after blasting is finished. The Contractor's Fire Prevention Representative shall be equipped as follows:

(a) At least one Size 0 or larger shovel.
(b) One back-pack pump filled with water.

8.2.2 Blasting hours are restricted under Fire Manning Class 4. Blasting is prohibited under Fire Manning Class 5. The Contractor shall provide the Site Construction Manager with a daily schedule, in writing. This schedule shall provide the reason for blasting, anticipated locations and anticipated time for blasting. The Site Construction Manager will keep the BLM/FS notified of all schedules.

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8.3 Welding

8.3.1 No welding, cutting or drilling of steel structures or their component parts shall be made without the approval of the Site Construction Manager. Where welding, drilling, or cutting is permitted by the Site Construction Manager, such welding, drilling or cutting shall be done in areas cleared to mineral soil a minimum of ten feet around the welding, drilling, or cutting area. The Contractor shall provide the following equipment with the welding, drilling, or cutting operation:

(a) ONE Size 0 or larger round, pointed shovel with long handle.

(b) TWO back-pack pumps full of water.

(c) ONE five-pound dry powder or CO_2 fire extinguisher.

8.3.2 The Contractor's Fire Prevention Representative and the Site Construction Manager shall be notified by the Authorized Officer where welding, drilling or cutting are to be done.

8.4 Spark Arresters

All internal combustion engines, stationary and mobile, shall be equipped with spark arresters, meeting U.S. Forest Service and BLM standards, except as noted below.

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8.3.2 The Contractor's Fire Prevention Representative and the Site Construction Manager shall be notified by the Authorized Officer where welding, drilling or cutting are to be done.

8.4 Spark Arresters

All internal combustion engines, stationary and mobile, shall be equipped with spark arresters, meeting U.S. Forest Service and BLM standards, except as noted below.

8.4.1 Spark arresters shall be in good working order.

8.4.2 Light truck and cars with factory installed (type) mufflers, in good condition, may be used on roads where the roadway is cleared of all vegetation.

8.4.3 On roads where vegetation exists, spark arresters shall be used.

8.4.4 Vehicles equipped with catalytic converters may be potential fire hazards and will be parked on cleared areas.

8.5 Special Provisions

8.5.1 The Contractor shall furnish an equipment list of equipment proposed for the project. All equipment assigned to the project may be inspected by the Authorized Officer before its use in construction of the project on National Forest Land and an inspection sticker will be placed in a conspicuous place. The equipment may be used on the project while in good operating order.

8.5.2 If required, flues used in construction camps and material staging yards shall be equipped with spark arresters in good working order and meeting U.S. Forest Service and BLM standards.

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8.5.2 If required, fires used in construction camps and material staging yards shall be equipped with spark arresters in good working order and meeting U.S. Forest Service and BLM standards.

8.6 Lunch and Warming Fires

8.6.1 Permits shall be obtained by the Grant/Permit Holder for lunch or warming fires when weather conditions warrant. Permits shall:

8.6.1.1 Specifiy the use and location of fires.

8.6.1.2 Require that fires be completely extinguished at the end of the day or when abandoned.

8.6.2 Permits will be issued for use only in areas that require them. A copy of permits shall be provided to the Contractor by the Site Construction Manager.

8.7 Smoking

Smoking signs and fire rules shall be posted on the project bulletin board at the Contractor's field office and at all showup locations during the fire season.

The Contractor is responsible and shall:

8.7.1 Require supervisory personnel to enforce all rules.

8.7.2 Prohibit smoking except in agreed, designated areas approved by the U.S. Forest Service and the BLM.

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8.7.1 Require supervisory personnel to enforce all rules.

8.7.2 Prohibit smoking except in agreed, designated areas approved by the U.S. Forest Service and the BLM.

8.8 Power Saws

All gasoline powered saws shall be provided with approved spark arrestors/mufflers and shall be in good condition. Gasoline powered chain saws shall be maintained in good condition throughout their assignment to the project. Chain saws and the operation of chain saws shall comply with the following requirements.

8.8.1 Arrestor/muffler shall contain a 0.023 inch mesh, stainless steel screen.

8.8.2 During the period of use, the operator shall have with him:

(a) One Size 0, long-handled shovel with rounded point and maintained in good working order.

(b) Approved belt carrying-type fire extinguisher.

8.8.3 During operation of chain saws, the following conditions shall be adhered to:

(a) Fueling or refueling shall be in an area which has been cleared of material which will carry.

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(a) One size 0, long-handled shovel with rounded point and maintained in good working order.

(b) Approved belt carrying-type fire extinguisher.

8.8.3 During operation of chain saws, the following conditions shall be adhered to:

(a) Felling or refelling shall be in an area which has been cleared of material which will carry

(b) Power saws shall be moved at least ten feet from the place of fueling or refueling before starting.

(c) All gas shall be carried in metal safety cans.

8.9 Warning Devices

Torches, fusees, highway flares or other devices with open flames shall not be allowed. The Contractor shall use only electric or battery operated warning devices within the project area.

8.10 Parking and Storing Areas

If required, equipment parking areas and small stationary engine sites shall be cleared of all flammable materials as determined necessary by the Authorized Officer.

8.10.1 Gas and oil storage areas will be cleared of all flammable material as designated by the Authorized Officer, with "NO SMOKING" signs posted throughout the area.

8.10.2 All used and discarded oil filters and oily rags or other waste shall be disposed off BLM/FS lands in an approved sanitary land fill.

(b) Power saws shall be moved at least ten feet from the place of fueling or refueling before starting.

(c) All gas shall be carried in metal safety cans.

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8.10.2 All used and discarded oil filters and oily rags or other waste shall be disposed off BLM/FS lands in an approved sanitary land fill.

8.10.3 Glass jugs or bottles SHALL NOT be used as containers for gasoline or other flammable materials.

8.11 Equipment Refueling

Fuel trucks shall have a 35 pound (minimum) fire extinguisher charged with necessary chemicals to control electrical and gas fires. If required, helicopter fuel trucks shall be grounded to the helicopter during refueling.

9.0 FIRE PRESUPPRESSION DURING FIRE SEASON

The Contractor shall comply with the following requirements.

9.1 Be responsible for providing continuous access to all roads for emergency vehicles during construction.

9.2 Equip vehicles as follows:

9.2.1 Personnel Vehicles, Manhauls, Trucks and Tractors

9.2.1.1 Minimum of one 5-pound dry chemical fire extinguisher.

9.2.1.2 One round-pointed, long-handled, size 0 shovel.

8.10.3 Glass jugs or bottles SHALL NOT be used as containers for gasoline or other flammable materials.

8.11 Equipment Refueling

Fuel trucks shall have a 25 pound (minimum) fire extinguisher charged with necessary chemicals to control electrical and gas fires. If required, helicopter fuel trucks shall be grounded to the helicopter during refueling.

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9.2.1.1 Minimum of one 5-pound dry chemical fire extinguisher.

9.2.1.2 One round-pointed, long-handled, size 0 shovel.

9.2.2 Pickup Trucks

Pickup trucks shall be equipped with:

9.2.2.1 One 2-1/2 pound dry chemical fire extinquisher.

9.2.2.2 One round-pointed, size 0, long-handled shovel.

9.2.3 Water Tanker

9.2.3.1 The Contractor shall have on-site and available for use, in good working order within one hour response time, a water tanker having a capacity of 1,500 gallons and complying with the following requirements.

(1) A pressure pump.

(2) Adjustable nozzle.

(3) Minimum of 300 feet of 1-1/2 inch cotton jacket, rubber-lined hose with American National Standards Institute (ANSI) threads.

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9.2.2 Pickup Trucks

Pickup trucks shall be equipped with:

9.2.2.1 One 2-1/2 pound dry chemical fire extinguisher.

9.2.2.2 One round-pointed, size 0, long-handled shovel.

9.2.3 Water Tanker

9.2.3.1 The Contractor shall have on-site and available for use, in good working order within one hour response time, a water tanker having a capacity of 1,500 gallons and complying with the following requirements.

(1) A pressure pump.

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(3) Minimum of 300 feet of 1-1/2 inch cotton jacket, rubber-lined hose with American National Standards Institute (ANSI) threads.

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9.2.3.2 The above-specified equipment shall be available throughout the project, but may be requested, in writing, by the U.S. Forest Service or the BLM during burning, blasting, and clearing.

9.2.4 Tool Caches

9.2.4.1 The Contractor shall purchase and furnish to the Site Construction Manager three 10-person tool caches. One cache will be placed in an inspector's 4 x 4 vehicle associated with the right-of-way clearing and the construction of access roads.

The second tool cache will be located with the steel erection operation; and the third will be assigned to the Project Fire Representative, who will have a Contractor's radio in his vehicle. The tool boxes shall be red in color, sealed with metal box-car-type seals, and labeled "FOR FIRE FIGHTING ONLY." The tool caches shall have the following tools placed therein.

(1) Ten electric headlamps with batteries.

9.2.3.2 The above-specified equipment shall be available throughout the project, but may be requested, in writing, by the U.S. Forest Service or the BLM during burning, blasting, and clearing.

9.2.4 Tool Caches

9.2.4.1 The Contractor shall purchase and furnish to the Site Construction Manager three 10-person tool caches. One cache will be placed in an inspector's 4 x 4 vehicle associated with the right-of-way clearing and the construction of access roads.

The second tool cache will be located with the steel erection operation, and the third will be assigned to the Project Fire Representative, who will have a Contractor's radio in his vehicle. The tool boxes shall be red in color, sealed with metal box-car-type seals, and labeled "FOR FIRE FIGHTING ONLY." The tool caches shall have the following tools placed therein.

(1) Ten electric headlamps with batteries.

(2) One first aid kit, ten-man unit.

(3) Two knapsacks.

(4) Five Pulaskies with sheaths.

(5) Five long-handled, rounded-pointed, size 0 shovels.

(6) Ten one-gallon canteens, filled with water.

9.2.4.2 The Site Construction Manager will have a Contractor furnished radio installed in his vehicle and will immediately expedite the tool caches upon request of the Contractor's Fire Control Representative or his designated representative.

9.2.4.3 In case any tool cache has been used, the Contractor shall immediately replenish it. All first aid boxes replenished shall be inspected, stamped and dated by an authorized laboratory. The first aid box shall then be wired or tied shut before placing in the tool cache.

9.3 <u>Fire Suppression</u>

9.3.1 Contractor shall be responsible for fire suppression in his project area.

(2) One first aid kit, ten-man unit.

(3) Two knapsacks.

(4) Five Pulaskies with sheaths.

(5) Five long-handled, rounded-pointed, size 0 shovels.

(6) Ten one-gallon canteens, filled with water.

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9.3 Fire Suppression

9.3.1 Contractor shall be responsible for fire suppression in his project area.

9.3.2 The Contractor shall take agressive action to prevent and suppress fires within the project area.

9.3.3 The Contractor shall utilize his men and equipment on the project for fighting fires within the project area.

9.3.4 Project equipment to be made available for fire fighting will be placed under a rental agreement prior to the start of each fire season as provided for in the Construction Contract.

9.3.4.1 When fires are the responsibility of the U.S. Forest Service or the BLM, labor and equipment will be paid for at current rental equipment and labor rates set forth in BLM/FS fire contracts.

9.3.4.2 The U.S. Forest Service and the BLM may call on the Contractor's men and equipment in emergencies for fires outside the project area. Payment will be made under Subarticle 9.3.4.1 above.

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9.3.4.2 The U.S. Forest Service and the BLM may call on the Contractor's men and equipment in emergencies for fires outside the project area. Payment will be made under Subarticle 9.3.4.1 above.

9.4 Contractor-Caused Fires

Costs involved with Contractor-caused fires will be charged to the Contractor's account. There will be no extension of time for delays caused by Contractor-related fires.

9.5 Fires Resulting from Third Parties

Should the Contractor's men and equipment be utilized by the BLM or the U.S. Forest Service on fires not caused by the Contractor, an extension of time will be given, if required. Costs to the Contractor during the fire will be reimbursed under Subarticle 9.3.4.1, Section 1.

9.6 Part 9 of this Section will be in force for the duration of the project. The plan shall be reviewed annually and revised as required. Should changes in the plan require additional costs to the Contractor through men and equipment, the Contractor shall submit a request for additional monies required and/or reduction therefrom with the basis of cost calculations to the Construction Manager. The Construction Manager will review the cost impact with the U.S. Forest Service and the BLM and make a recommendation to the right-of-way Grant/Permit Holder. Upon approval by the Grant/Permit Holder of a cost increase or a reduction in cost, the Construction Manager will notify the BLM, the U.S. Forest Service, and the Contractor that the revised plan is in effect. Plan revisions required by the BLM/FS shall be carried

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9.6 Part 9 of this section will be in force for the duration of the project. The plan shall be reviewed annually and revised as required. Should changes in the plan require additional costs to the contractor, through men and equipment, the contractor shall submit a request for additional monies required and/or reduction therefrom with the basis of cost calculations to the Construction Manager. The Construction Manager will review the cost impact with the U.S. Forest Service and the BLM and make a recommendation to the right-of-way Grant/Permit Holder. Upon approval by the Grant/Permit Holder of a cost increase or a reduction in cost, the Construction Manager will notify the BLM, the U.S. Forest Service, and the contractor that the revised plan is in effect. Plan revisions required by the BLM/FS shall be carried

out by the Grant/Permit Holder, cost impact problems with the contractors shall be resolved by the Grant/ Permit Holder.

10.0 DUTIES OF PROJECT FIRE REPRESENTATIVE

In addition to the responsibilities defined in Article 3.3 Section 1, the Contractor shall designate a Project Fire Representative whose duties shall include:

10.1 Regular inspections of all tools and equipment for compliance with U.S. Forest Service and BLM specifications. Tool caches shall be inspected weekly during the fire season. The first aid box included therein SHALL NOT BE OPENED.

10.2 Knowledge of all state, county, and Federal laws, ordinances and regulations pertaining to fire, flammable fuels, and explosives on the project and make regular inspections thereof. This inspection may be included with Article 10.1, Section 1, but must be documented accordingly.

10.3 Post smoking and fire rules as indicated in Article 8.7, Section 1.

10.4 Make an initial attack on fires within the project area.

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10.3 Post smoking and fire rules as indicated in Article 8.7, Section 1.

10.4 Make an initial attack on fires within the project area.

10.5 Accompany the Authorized Officer or his designated representative and the Site Construction Manager or his designated representative on fire inspections of the project.

10.6 Keep the Authorized Officer informed of all burning and blasting operations in accordance with Articles 8.1. and 8.2 of Section 1.

10.7 Ensure that all project employees are aware of the contents of the Fire Protection Plan.

10.8 Remain on duty in the immediate area of construction whenever any construction activity is in progress and additional periods under Article 8.2 Section 1.

10.9 Report all wild fires to the BLM/FS in accordance with Articles 3.5 and 3.6 of Section 1.

10.10 Assume supervision of fire suppression activities until relieved by the Authorized Officer. (See Article 3.1 Section 1).

10.11 The Project Fire Control Representative shall have, in his 4 x 4 vehicle, the following equipment furnished by the contractor:

10.5 Accompany the Authorized Officer or his designated representative and the Site Construction Manager or his designated representative on fire inspections of the project.

10.6 Keep the Authorized Officer informed of all burning and blasting operations in accordance with Articles 8.1. and 8.2 of Section 1.

10.7 Ensure that all project employees are aware of the contents of the Fire Protection Plan.

10.8 Remain on duty in the immediate area of construction whenever any construction activity is in progress and additional periods under Article 8.2 Section 1.

10.9 Report all wild fires to the BLM/FS in accordance with Articles 3.5 and 3.6 of Section 1.

10.10 Assume supervision of fire suppression activities until relieved by the Authorized Officer. (See Article 3.1 Section 1).

10.11 The Project Fire Control Representative shall have, in his 4 x 4 vehicle, the following equipment furnished by the contractor:

Item	Description	Quantity
1	Pickup Truck (4x4), 3/4 Ton	1
2	Two-Way Mobile Radio Operating (Administrative Unit) Frequency	1
3	"Slip-On" Water Tank with 125 Gallon Capacity and Pumps Units with Hose Fittings	1
4	Axe, Double Bit, Cruiser Type	1
5	Sheath for Axe	1
6	Pulaski Tool	2
7	Sheath for Pulaski Tool	2
8	Shovels, Long Handle, Round Point, Size 0	2
9	Canteen, One Gallon (Water)	2
10	Hard Hat	2
11	Headlamps, Electric	2
12	Back-Pack Pump, Complete	2
13	Hoses	
	(1) Cotton Jacket, 1-1/2" (NS Thread)	200'
	(2) Cotton Jacket, 1" (IP Thread)	400'
	(3) High Pressure, 1" (IP Thread)	250'
	(4) Suction, 1-1/2"	24'
14	Hose Fittings	
	(1) R-5 Forester Nozzles	2
	(2) R-S Nozzle, Tips	
	(a) Fog	6
	(b) Straight Stream	6
	(3) Reducer, 1-1/2" NS to 1" IP	4
	(4) Strainer, Suction, 1-1/2"	1
	(5) Siamese, 1-1/2" NS Thread, both Male and Female	1
	(6) Knapsacks	2
	(7) Spanner Wrench, Large (1-1/2" Hose)	1
	(8) Spanner Wrench, Small (1"Hose)	1
	(9) Carpenter Hammer	1
	(10) Pliers, Slip Joint	1
	(11) Pliers, Side Cutter, 8"	1
	(12) Screwdriver, 8"	1
	(13) Crescent Wrench, 10"	1
	(14) Pipe Wrench, 18"	1

Item	Description	Quantity
1	Pickup Truck (4x4), 3/4 Ton	1
2	Two-Way Mobile Radio operating (Administrative Unit) Frequency	1
3	"Slip-On" Water Tank with 125 Gallon Capacity and Pump Units with Hose Fittings	1
4	Axe, Double Bit, Cruiser Type	1
5	Sheath for Axe	1
6	Pulaski Tool	2
7	Sheath for Pulaski Tool	2
8	Shovels, Long Handle, Round Point, Size 0	2
9	Canteen, One Gallon (Water)	2
10	Hard Hat	2
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	(a) Fog	6
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	(3) Reducer, 1-1/2" NS to 1" IP	4
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	(5) Siamese, 1-1/2" NS Thread, both Male and Female	1
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	(7) Spanner Wrench, Large (1-1/2" Hose)	1
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	(12) Screwdriver, 8"	1
	(13) Crescent Wrench, 10"	1
	(14) Pipe Wrench, 18"	1

Item	Description	Quantity
15	Tool Box	1
16	Flashlight, 2 Cell	1
17	Fire Extinguisher, 5 Pound Dry Chemical	1
18	Ejector/Foot Valve, (To Much Pump Capacity)	1
19	First Aid Kit, 10 Man Unit	1

11.0 NOTIFICATION OF CONDITION CLASS

When required, the Site Construction Manager will inform the Contractor on a daily basis, of the condition class, verbally and in writing with confirming documentation to the U.S. Forest Service, the BLM and the Contractor.

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15	Tool Box	1
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CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 2

CLEARING STIPULATIONS AND MITIGATION MEASURES DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 2

CLEARING STIPULATIONS AND

MITIGATION MEASURES

DC TRANSMISSION LINE

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CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 2

CLEARING STIPULATIONS AND

MITIGATION MEASURES

DC TRANSMISSION LINE

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CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 2

CLEARING STIPULATIONS AND

MITIGATION MEASURES

DC TRANSMISSION LINE

1.0 PURPOSE

To provide clearing stipulations and mitigation measures during construction of the DC Transmission Line on U.S. Forest Service or Bureau of Land Management rights-of-way.

2.0 OBJECTIVE

To permit orderly completion of clearing of right-of-way by the various methods approved by the Authorized Officer.

3.0 APPROVAL

The Construction Manager will allow the construction contractor to begin clearing upon receipt of authorization to proceed with clearing by the Authorized Officer. The Contractor shall clear the right-of-way in accordance with plan and profile, contract documents and description of units shown therein. The road locations and tower sites will be flagged in accordance with provisions set forth in Section 6.

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION I

CLEARING STIPULATIONS AND

MITIGATION MEASURES

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4.0 STIPULATIONS

Clearing of the right-of-way for the DC Transmission Line shall be restricted to the minimum that is necessary to provide safe construction, operation, and maintenance of the line. Clearing shall mean the removal or trimming of vegetation which would be a hazard to powerline operation. General restrictions are described below.

4.1 Side Hill Cut

Side hill cuts will be necessary for the following functions and/or operations.

4.1.1 Construction of Access Roads

This task shall require approval of the Authorized Officer and the Construction Manager. Changes shall require approval of the Construction Manager and the Authorized Officer.

4.1.2 Foundation Construction

Side hill cuts for safe placing of equipment shall be approved by the Construction Manager and the Authorized Officer. Failure of the Contractor to comply with this provision may result in the shut down of foundation construction. Shut downs due to lack of approval which result in additional costs to the Contractor or the Grant/Permit Holdershall be made to the Contractor's account.

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4.1.3 Tower Installation

Side hill cuts for safe placing of a crane or other tower assembling, erecting, hauling, loading, and off-loading shall be approved in advance by the Construction Manager and the Authorized Officer. Failure by the Contractor for noncompliance with this requirement may result in the shut down of the tower installation operation, and any additional costs to the Contractor or the Grant/Permit Holder shall be made to the Contractor's account.

4.1.4 Conductor Operation

Side hill cuts for conductor stringing, specifically for placement of conductor reel trailers, tensioning equipment and temporary snubs and hold-downs, may be required. Side hill cuts for conductor setups shall be approved in advance of conductor stringing operations by the Construction Manager and the Authorized Officer. Changes may be required and shall be approved in advance by the Construction Manager and the Authorized Officer before work on the change request can begin. Failure of the Contractor to obtain approvals, or to comply with contract requirements, shall cause shut down of the conductor operation. Any additional costs to the Contractor or the Grant/Permit Holder resulting

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from a shut down for noncompliance for side hill cuts shall be made to the Contractor's account.

4.1.5 Method of Change Request for Side Hill Cuts

Should the Contractor decide to change the location or stipulations to a previously requested side hill cut, he shall make such request in writing to the Construction Manager. The request shall show the previously approved side hill cut in detail on a construction sketch and the revision thereto. The Construction Manager will notify the Authorized Officer and request approval. The Authorized Officer may approve or may provide assistance during the process or request revisions thereto. Approval of the Authorized Officer is required.

4.2 Construction Plan

The construction documents will include the construction plan.

4.2.1 Special Clearing Requirements

The DC Transmission Line is expected to include danger trees. The amount of trimming will be included on a site prescription form prepared with and approved by the BLM/FS.

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The DC Transmission Line is expected to include danger trees. The amount of trimming will be included on a site prescription form prepared with and approved by the BLM/FS.

4.2.2 Clearing of Vegetation

Clearing of vegetation will be subject to the certain restrictions which may be specified in detail due to environmental reasons. This stipulation refers to Subarticle 4.2.3, Section 2 "Straight Line Clearing."

4.2.3 Straight Line Clearing

The Contractor shall not use straight line clearing unless authorized, in writing, by the Site Construction Manager and the Authorized Officer.

5.0 MITIGATING MEASURES

5.1 <u>Vegetative Cover and Protection of Soil</u>

5.1.1 Vegetative Cover

Vegetative cover shall be protected and preserved as directed by the Authorized Officer; marketable trees will not be cut or removed unless marked.

5.1.2 Soil

As directed by the Authorized Officer, the Construction Manager shall limit and restrict the Contractor in traversing the right-of-way with vehicles and equipment. Soil will be protected and preserved as directed by the Authorized Officer.

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5.2 Vegetation Defined

Vegetation shall consist of four categories:

5.2.1 Marketable Timber

Marketable trees that are cut, injured or destroyed shall be paid for by the Grant/Permit Holder at current stumpage rates applicable to the sale area. The timber will be disposed of as directed by the Authorized Officer. (Refer to Introduction, section 2.3.1)

5.2.2 Nonmarketable Timber

Nonmarketable timber may be disposed of as approved by the Authorized Officer in any of the following manners. (Burning shall be subject to the provisions of Section 1.)

5.2.2.1 Stacked at the side of the right-of-way and burned in accordance with authorized permit.

5.2.2.2 Stacked on the side of the right-of-way and chipped.

5.2.2.3 Other disposal as approved by the Site Construction Manager and the Authorized Officer.

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5.2.2.3 Other disposal as approved by the Site Construction Manager and the Authorized Officer.

5.2.3 Understory and/or Marketable Vegetation Contractor shall use the same procedures as set forth in Subarticle 5.2.2 Section 2.

5.2.4 Ground cover shall be left in place unless directed otherwise by the Authorized Officer. If stock piling of ground cover is agreed to be a fire hazard by the Site Construction Manager and the Authorized Officer, it will be stacked at the side of the right-of-way and burned, subject to authorized burning permits, in accordance with Section 1. Ground cover not agreed upon as a fire hazard shall be used for right-of-way restoration as mulch and soil erosion control.

5.3 Disturbed Top Soil

Stockpiling of top soil shall only be done if so directed by the Authorized Officer. Soil that is stockpiled shall be used in restoration of access roads, ruts, soil erosion prevention, placing around footings, restoring side hill cuts, and stringing operations.

5.4 Tree Cutting Requirements

5.4.1 Vegetation including Stump Heights

The remaining portion of all removed vegetation (markertable timber, nonmarketable

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5.4 <u>Tree Cutting Requirements</u>

5.4.1 Vegetation including Stump Heights

The remaining portion of all removed vegetation (marketable timber, nonmarketable

timber, and under story types) except in specified areas (as set fourth in Subarticle 5.4.2 Section 2), shall not exceed six inches DBH.

5.4.2 Specified Areas

For environmental considerations or near proposed access roads, certain areas may be specified in the construction contract where the Contractor shall leave the stumps as near to the ground level as practical with the undercut face away from the travel route. The Authorized Officer shall specify areas on site prescription forms or in this section or on the plan or profile where stumps will be as near to the ground as practical.

5.4.3 Protection of Leave Trees

The Contractor shall protect leave trees during clearing by wedging or pulling with a line as necessary to fell trees without damaging leave trees.

5.5 Archeological Sites

The Contractor shall obtain prior approval from the Site Construction Manager and the Authorized Officer before removal of vegetation on inventoried

timber, and under story types) except in specified areas (as set forth in subarticle 5.4.2 Section 2), shall not exceed six inches DBH.

5.4.2 Specified Areas

For environmental considerations or near proposed access roads, certain areas may be specified in the construction contract where the contractor shall leave the stumps as near to the ground level as practical with the undercut face away from the travel route. The Authorized Officer shall specify areas on site prescription forms or in this section or on the plan or profile where stumps will be as near to the ground as practical.

5.4.3 Protection of Leave Trees

The Contractor shall protect leave trees during clearing by wedging or pulling with a line as necessary to fell trees without damaging leave trees.

5.5 <u>Archeological sites</u>

The Contractor shall obtain prior approval from the Site Construction Manager and the Authorized Officer before removal of vegetation on inventoried

archeological sites. These sites shall be flagged in accordance with Section 6. Failure of the Contractor to comply with this provision may result in shut down of the clearing operation. Any costs, as a result of a shutdown caused by noncompliance, to the Contractor or the Grant/Permit Holder, shall be made to the Contractor's account.

5.6 Vegetation

All vegetation to be cut or removed will be designated by the Authorized Officer.

5.7 Slash Cleanup Methods

5.7.1 Construction slash from marketable timber, nonmarketable timber not used as cord wood, and under story more than six inches in diameter and eight feet long, and concentrations of construction slash will be treated by one or a combination of the following methods:

5.7.1.1 Hydro-ax.

5.7.1.2 Lopping and scattering.

5.7.1.3 Chipping.

5.7.1.4 Hauling out to a designated location (if no other method is feasible).

5.7.1.5 Burning and/or burying.

archeological sites. These sites shall be flagged in accordance with Section 5. Failure of the Contractor to comply with this provision may result in shut down of the clearing operation. Any costs, as a result of a shutdown caused by noncompliance, to the Contractor or the Grant/Permit Holder, shall be made to the Contractor's account.

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5.7.1.5 Burning and/or burying.

5.7.1.6 Use in water shed management structures.

5.7.2 Disposal of Slash

The Contractor shall base the disposal of slash on the following requirements.

5.7.2.1 Use of a hydro-ax.

5.7.2.2 Lopping and scattering of all slash in area of helicopter construction or difficult access areas. Scattering of slash shall be made over the disturbed area and no greater than 18 inches high.

5.7.2.3 Chipping of construction slash, up to four inches in diameter, shall be processed through a chipping machine. The chips shall be deposited to a loose depth not to exceed six inches.

5.7.2.4 If required, slash shall be hauled to a central location designated by the Authorized Officer for the later use of the BLM/FS.

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5.2.2.4 If required, slash shall be hauled to a central location designated by the Authorized Officer for the later use of the BLM/FS.

5.7.2.5 Burning of slash shall be in accordance with provisions in Section 1.

5.7.2.6 When requested by the Chief Inspector and approved by the Authorized Officer, the Contractor shall place combustible slash in drainage patterns to retard water flow and slow the rate of erosion. The request, when made and approved by the Authorized Officer, shall be in writing and shall show the location and size of pattern in which slash is to be placed.

5.7.3 The Contractor shall not place slash and non-combustible debris in streams, stream beds, lakes or meadows. If clearing is required in these areas, the slash shall be removed and disposed of in an area and manner approved by the Site Construction Manager and the Authorized Officer.

5.7.4 The Contractor shall dispose of residual slash and stumps as provided in Subarticles 5.7.1 and 5.7.2 of Section 2.

5.7.2.5 Burning of slash shall be in accordance with provisions in Section 1.

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5.7.5 Protection from Damage

In addition to the requirements under Article 5.1 Section 2, the Contractor shall protect from damage throughout the construction period, trees, shrubs, grass, and top soil which are not designated to be cleared or driven over.

5.7.6 Pruning Requirements

The Contractor shall prune or trim limbs from trees, flush with the trunk of the tree, using shears or saws.

5.7.7 Specific Clearing and Slash Treatment Restriction

5.7.7.1 Areas considered as sensitive impact areas, compiled from the FES and subsequent field studies, are included in Appendix "A" of this COM Plan and on the site prescription forms.

(1) Sensitive resource areas include, but are not necessarily limited to:

(a) Sensitive road crossings.

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5.7.7 Specific Clearing and Slash Treatment Restriction

5.7.7.1 Areas considered as sensitive impact areas, compiled from the FSS and subsequent field studies, are included in Appendix "A" of this CDM Plan and on the site prescription forms.

(1) Sensitive resource areas include, but are not necessarily limited to:

(a) Sensitive road crossings;

(b) Landscapes of high visual quality designation.

(c) Ecologically sensitive habitat.

(d) Stream or river crossings.

5.7.7.2 Special Clearing Requirements

(1) The Contractor shall use selective clearing of vegetation along primary or improved road crossings.

(2) A visual buffer of trees and/or brush will be retained across the right-of-way and adjacent to the road to screen the clearing operation from viewers along the highway.

(3) Access roads, which are required from improved roads, shall be located diagonally through the vegetative screen to minimize views down the right-of-way. If the road crossing significantly reduces the screening potential, an alternate road location will

(b) Landscape of high visual quality designation.

(c) Ecologically sensitive habitat.

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(3) Access roads, which are required from improved roads, shall be located diagonally through the vegetative screen to minimize views down the right-of-way. If the road crossing significantly reduces the screening potential, an alternate road location will

be provided and approved by the Construction Manager and the Authorized Officer.

(4) Clearing and slash disposal in areas of visual sensitivity, such as recreational areas and visual resource management landscapes, shall be approved by the Site Construction Manager and the Authorized Officer.

(5) Rivers and Streams

The following requirements prevail and shall require detailed plans on methods approved by the Construction Manager and the Authorized Officer.

(a) Site specific plans for right-of-way clearing, including disposal.

(b) Site specific plans for access road construction.

(c) Site specific plans for foundation excavation and disposal.

(d) Site specific plans for steel assembly and erection.

(e) Site specific plans for conductor installation.

(f) Site specific plans for right-of-way cleanup.

The Contractor shall not cross any stream on the DC Line without prior written authorization from the Site Construction Manager and the Authorized Officer.

(6) Existing ground cover shall be protected in accordance with Subarticle 5.2.4, Section 2.

(c) Site specific plans for foundation excavation and disposal.

(d) Site specific plans for steel assembly and erection.

(e) Site specific plans for conductor installation.

(f) Site specific plans for right-of-way cleanup.

The contractor shall not cross any stream on the DC line without prior written authorization from the Site Construction Manager and the Authorized Officer.

(6) Existing ground cover shall be protected in accordance with Subarticle 8.2.4, Section 2.

(7) As required by the Authorized Officer, the Site Construction Manager shall restrict or stop Contractor's construction operations during adverse weather conditions to prevent rutting or excessive scarring of the soil and deterioration of soil. The Site Construction Manager shall notify the Contractor to restrict or stop work.

(8) Construction activities will follow clearing operations at a reasonable rate of progress to allow cleanup operations to proceed continuously throughout the project.

5.7.8 Overburden and Excess Material Disposal

5.7.8.1 Surface disturbance of the right-of-way during construction may occur at any of the following construction operations:

(1) Right-of-way clearing.

(2) Access road construction.

(7) As required by the Authorized Officer, the Site Construction Manager shall restrict or stop contractor's construction operations during adverse weather conditions to prevent rutting or excessive scarring of the soil and deterioration of soil. The Site Construction Manager shall notify the contractor to restrict or stop work.

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(2) Access road construction.

(3) Foundation excavation.

(4) Foundation backfill.

(5) Structure hauling.

(6) Structure assembly and erection.

(7) Conductor stringing.

(8) Counterpoise installation.

5.7.8.2 When surface disturbance occurs, the overburden shall be stockpiled along the right-of-way, and all material acceptable to the Authorized Officer shall be returned to the area disturbed.

(1) All topsoil shall be spread evenly around the foundation, over the right-of-way, or used in the cleanup operation for grading and slope. (See Article 5.3 Section 2).

(2) Any excess material not used for backfill shall be disposed of as approved by the Site Construction Manager and the Authorized Officer.

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(4) Foundation backfill.

(5) Structure hauling.

(6) Structure assembly and erection.

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CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 3

EROSION CONTROL REVEGETATION AND RESTORATION MEASURES

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 3

EROSION CONTROL

REVEGETATION AND

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RESTORATION MEASURES

DC TRANSMISSION LINE

1.0 PURPOSE

To provide rehabilitation and erosion control provisions and mitigation measures and outline actions to be taken during the construction of the DC Transmission Line across BLM and FS lands.

2.0 OBJECTIVE

To protect and restore the right-of-way and prevent erosive damage during and after construction of the DC Transmission Line across BLM and FS lands.

3.0 CLOSURE OF DESIGNATED ROADS

3.1 <u>Abandonment of Temporary Roads</u>

3.1.1 The abandonment of temporary roads shall be accomplished as follows or, if directed by the Authorized Officer, as outlined in Article 3.2 of this Section.

CONSTRUCTION, OPERATIONS AND

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3.1.1 The abandonment of temporary roads shall be accomplished as follows or, if directed by the Authorized Officer, as outlined in Article 3.2 of this section.

3.1.1.1 The natural contours in cut and fill areas shall be restored by use of a "grade-all" or equipment that shall achieve comparable results.

3.1.1.2 All side slopes shall be constructed to obtain their natural slope as far as practical.

3.1.1.3 All ruts, scars, and artificial ditches shall be filled in accordance with Section 2.

3.1.1.4 All culverts shall be removed and drainage channels left in a natural state unless otherwise directed by the Site Construction Manager and approved by the Authorized Officer. Costs for removal or other work shall be charged to the Contractor's account.

3.1.1.5 All regraded roadways that are abandoned shall be revegetated in accordance with Article 4.0 Section 3.

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3.1.1.5 All regraded roadways that are abandoned shall be revegetated in accordance with Article 4.0 Section 3.

3.1.1.6 In areas where no cut or fill is made the roadway will be ripped or scarified and will be completely blocked by barriers of native material as directed by the Site Construction Manager and approved by the Authorized Officer.

3.2 Abandonment of Existing Roads

3.2.1 Existing roadways used during construction under a use permit or grant and as directed by the BLM/FS shall be abandoned as follows:

3.2.1.1 All regraded or disturbed roadway areas shall be revegetated in accordance with Article 4.0 Section 3.

3.2.1.2 The existing roadway shall be abandoned by rough grading, ripping or scarifying, cross-ditching, and opening drainage to prevent erosion to enhance revegetation.

3.2.1.3 Work on roadways shall not commence until after the designated sections of existing roads are no longer needed to serve construction traffic.

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3.2.1.3 Work on roadways shall not commence until after the designated sections of existing roads are no longer needed to serve construction traffic.

3.2.1.4 The Contractor shall fill all ditches, ruts, and depressions as noted in Subarticle 3.1.1.3 Section 3.

3.2.1.5 Where required, live streams and other drainages shall be opened by removing the abandoned structures and grading the approach fills. Stream flows shall not be impaired.

3.2.1.6 The Contractor shall be responsible for proper drainage on the right-of-way or as specified through special use permits during the construction period. The Contractor shall divert concentrated water flows from roadways and other disturbed areas into safe areas. Flowing water shall not be directed into natural stream channels without the approval of the Site Construction Manager and the Authorized Officer. The Contractor shall spread flowing water over undisturbed soil.

3.2.1.7 After rough grading in accordance with Subarticle 3.2.1.2, Section 3 the Contractor shall cross-ditch the roadway

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3.2.1.7 After rough grading in accordance with Subarticle 3.2.1.2, Section 3 the Contractor shall cross-ditch the roadway

and install "water bars." Water bars shall be sloped with the grade and cut to a minimum 12-inch depth below the surface. The grade of the water bar shall be two percent greater than the grade of the road.

3.2.1.8 Excavated materials from cross-ditching and water bar installation shall be placed on the downgrade side of the ditch and extend from the outside shoulder line into the backslope to form a positive intercepting ditch.

3.2.1.9 Water bars shall be spaced on road grades greater than 4 percent, 4 to 8 percent grade on 200 foot intervals, and greater than 8 percent grade on 100 foot intervals. In addition, water bars shall be installed at all alignment changes (curves), significant grade changes, and as requested by the Authorized Officer with notification to the Contractor in writing by the Site Construction Manager.

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3.3 Off-Road Tracts

Off-road tracts on an off the right-of-way shall be treated in accordance with Article 3.1 Section 3.

3.4 Identification of Closed Roads

3.4.1 Roads, when closed, shall be posted by the Contractor with signs as directed by the Authorized Officer. The sign shall explain why closure is necessary. For example, "ROAD CLOSED TO PROTECT WATERSHED AND WILDLIFE."

3.4.2 Closure signs shall be on metal backs of a 24" X 24" square shape and mounted on wooden posts.

3.4.3 The colors of signs shall be black letters and border on a yellow background.

3.5 Abandoned Structures

Disposal of salvageable and nonsalvageable material shall be disposed of in accordance with the Construction Contract or as requested by the Authorized Officer and communicated to the Contractor in writing.

4.0 REVEGETATION OF DISTURBED AREAS

4.1 The Contractor shall be responsible for erosion control and revegetation measures on the right-of-way during the construction period.

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4.1 The Contractor shall be responsible for erosion control and revegetation measures on the right-of-way during the construction period.

4.2 The Grantee shall restore the right-of-way as specified in the COM Plan to a stable condition acceptable to the Authorized Officer.

4.3 <u>Backfilling, Grading and Topsoil</u>

4.3.1 Contours of the ground shall be restored to permit normal surface drainage along the right-of-way and other special permitted areas.

4.3.2 Topsoil shall not be stripped and/or stockpiled at construction sites and such other locations of disturbance along the right-of-way unless indicated and approved on a corresponding site prescription form.

4.3.3 Excess excavated material not used for backfill shall be evenly spread on cleared areas prior to replacing the topsoil. The Site Construction Manager may direct the Contractor to remove unsuitable backfill from the site as requested by the Authorized Officer in writing. (See Section 2)

4.3.4 Erosion control structures such as water bars, diversion channels, and terraces, shall be constructed to divert water and reduce soil erosion along rights-of-way or other areas disturbed by the construction.

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4.3.5 All structures such as terraces, levees, underground drainage systems, irrigation pipelines, and canals shall be restored to preconstruction conditions so they will function as originally intended.

4.3.6 Temporary work space areas used at stream and highway crossings and other special sites shall be restored to preconstruction condition or to a condition acceptable to the Authorized Officer and Site Construction Manager. The upland areas and banks will be revegetated to simulate preconstruction conditions. Where revegetation is not possible, the banks will be protected with rock. The stream-bed will be returned to its original elevation and grade.

4.4. <u>Land Preparation for Seeding and Cultivation</u>

Construction operations are expected to cause excess compaction and damage soil conditions which affect soil productivity and reduce seeding success in the right-of-way area. It is the intent of these specifications that the Contractor utilize practices and techniques that shall provide the following minimum results and improve altered soil conditions, protect from erosion and improve seeding.

4.3.5 All structures such as terraces, levees, underground drainage systems, irrigation pipelines, and canals shall be restored to preconstruction conditions so they will function as originally intended.

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4.4.1 Where construction areas are subject to strong erosional forces prior to vegetation re-establishment, special mulching practices or matting shall be used to promote physical stabilization. Snow fences along linear rights-of-way will be constructed where appropriate to prevent further erosion.

4.4.2 In addition to installing erosion-control structures, erosion-prone areas shall be reseeded, using supplemental fertilizers as necessary.

4.4.3 Soils shall be prepared to provide the best possible conditions for the establishment of grass species.

4.4.4 Rock mulches shall be used in steep-sloping rock outcrop areas to reduce erosion and promote vegetal growth.

4.4.5 Cultivation and land preparation operations, with machine or by hand, on steeply sloping areas shall be done on the contour to minimize erosion.

4.4.6 Soil areas with rock fragments, such as very coarse gravel, cobble, or stone scattered on the surface, shall be restored to simulate the original preconstruction surface condition and to blend with the adjoining area.

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4.4.7 All closed roadbeds and other areas where soil disturbance has occurred shall be scarified to a condition acceptable to the Authorized Officer and Site Construction Manager. Whenever possible, scarification shall be on the contour. However, roadbeds may be scarified the length of the road regardless of contour. Scarification shall be at least 12" deep with rippers not more than 16" apart.

4.4.8 Chiseling will be used unless directed otherwise in writing by the Site Construction Manager and requested by the Authorized Office, in rangeland areas to reduce compaction and improve soil permeability. Pitting and contour furrowing, as directed by the Site Construction Manager and the Authorized Officer, shall be done as needed on steeper slopes of disturbed areas to increase infiltration and to reduce runoff and erosion.

4.4.9 Commercial fertilizer shall be applied to soil areas with low inherent fertility to maintain crop yields and establish grass seedings. Application rates will be commensurate with annual precipitation.

4.4.10 Erosion control structures and measures shall be applied on sloping areas to reduce accelerated

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4.4.10 Erosion control structures and measures shall be applied on sloping areas to reduce accelerated

erosion, to allow re-establishment of preconstruction surface soil conditions, and to allow natural revegetation.

4.5 Revegetation (Reseeding and Planting)

4.5.1 Areas where reseeding and specific information and requirements for revegetation on the DC Transmission Line are shown on the Site Prescription Forms.

4.5.2 Changes may be required during the construction due to changing conditions. The Authorized Officer may request a change, and the Construction Manager shall be responsible for having the Contractor or others complete the requested changes.

4.5.3 The appropriate seed mixture and fertilizer application rates from the following table will be used:

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4.5.3 The appropriate seed mixture and fertilizer application rates from the following table will be used:

TABLE 1
SEEDING SPECIES FOR EROSION CONTROL

District	Packet Number	Species	Pounds/Acre
(BLM), Richfield	R1 (Low elevations)	Indian ricegrass	4
		Pubescent wheatgrass	1
		Fourwing saltbush	2
		Total	7
(BLM), Richfield	R2 (High elevations)	Indian ricegrass	3
		Blue bunch wheatgrass	2
		Fourwing saltbush	2
		Yellow sweet clover	1
		Gilleta grass	½
		Total	8½
(FS Lands)	Dixie National Forest		
	FS 1	Fairway Crested Wheatgrass	2
		Pubescent Wheatgrass	2
		Yellow Sweetclover	2
		Small Burnet	1
		Four Saltbush	2
			9
	FS 2	Smooth Browe	3
		Fairway Crested Wheatgrass	2
		Ladak Alfalfa	1
		Yellow Sweetclover	2
		Pubescent Wheatgrass	1
		Bitterbrush	2
			11
	FS 3	Fairway Crested Wheatgrass	2
		Pubescent Wheatgrass	2
		Small Burnet	1
		Yellow Sweetclover	1
		Bitterbrush	2
		Cliffrose	1
		Winterfat	1
			10
(BLM), Cedar City	CC1 (Beaver county line south to Newcastle, Utah)		
		Siberian wheatgrass	5
		Rambler clover	½
		Laduk clover	½
		Fourwing saltbush	1½
		Russian wildrye	1
		Small Bernet	½
		Yellow sweet clover	1
		Total	10

TABLE 1
SEEDING SPECIES FOR EROSION CONTROL

District	Packet Number	Species	Found/A
(BLM), Richfield	R1 (Low elevations)	Indian ricegrass	6
		Pubescent wheatgrass	1
		Fourwing saltbush	2
		Total	9
(BLM), Richfield	R2 (High elevations)	Indian ricegrass	3
		Blue bunch wheatgrass	2
		Fourwing saltbush	4
		Yellow sweet clover	1
		Crimiste grass	4
		Total	14
(FS lands)	Dixie National Forest FS 1		
		Fairway Crested Wheatgrass	2
		Pubescent Wheatgrass	4
		Yellow Sweetclover	2
		Small Burnet	1
		Four Saltbush	2
			11
	FS 2		
		Smooth Brome	3
		Fairway Crested Wheatgrass	2
		Ladak Alfalfa	3
		Yellow Sweetclover	2
		Pubescent Wheatgrass	1
		Bitterbrush	2
			13
	FS 3		
		Fairway Crested Wheatgrass	2
		Pubescent Wheatgrass	2
		Small Burnet	1
		Yellow Sweetclover	1
		Bitterbrush	2
		Cliffrose	1
		Winterfat	1
			10
(BLM), Cedar City	CC1 (Beaver county line south to Newcastle, Utah)		
		Siberian wheatgrass	3
		Rambler clover	4
		Ladak clover	4
		Fourwing saltbush	9
		Russian wildrye	1
		Small Burnet	4
		Yellow sweet clover	1
		Total	10

District	Packet Number	Species	Pounds/Acre
(BLM), Cedar City	CC2 (Newcastle, Utah South to Dixie National Forest)		
		Siberian wheatgrass	5
		Rambler clover	½
		Laduk clover	½
		Fourwing saltbush	1½
		Russian wildrye	1
		Small Bernet	½
		Yellow sweet clover	1
		Bitterbrush	1½
		Total	11½
(BLM), Cedar City	CC3 (From South Boundary of Dixie NF to the Motoqua Road)		
		Crested wheatgrass	5
		Pubescent wheatgrass	5
		Yellow sweet clover	3
		Small Bernet	2
		Total	15

This seed packet information will also apply to all access roads to be closed and/or rehabilitated.

NOTE: Information contained in this table is supplied by the BLM/FS and will be used in conjunction with the Tower Site Prescription forms.

District	Variant Number	Species	Pounds/Ac
(BLM), Cedar City	CC2 (Newcastle, Utah South to Dixie National Forest)		
		Siberian wheatgrass	8
		Ladino clover	4
		Ladak clover	4
		Fourwing saltbush	14
		Nuttall milkvetch	1
		Small Burnet	4
		Yellow sweet clover	1
		Bitterbrush	1½
		Total	33½
(BLM), Cedar City	CC3 (From South Boundary of Dixie NF to the Motoqua Road)		
		Crested wheatgrass	3
		Pubescent wheatgrass	5
		Yellow sweet clover	3
		Small Burnet	2
		Total	13

This seed packer information will also apply to all access roads to be cleared and/or rehabilitated.

NOTE: Information contained in this table is supplied by the BLM/FS and will be used in conjunction with the Tower Site Prescription Form.

4.6 Seeding Requirements

4.6.1 Seeding shall be done in the fall following the last activity that causes disturbance of any area, except the work will be performed only at times when weather, moisture and other conditions at the site are favorable. No work will be performed when the wind conditions prohibit uniform distribution of seed, or when the ground is frozen or snow covered.

4.6.2 Mechanical spreaders shall be used for spreading fertilizer, except that on steep slopes where fertilizer cannot be incorporated effectively by mechanical equipment, it may be applied by other approved methods and hand worked to incorporate into the soil.

4.6.3 Mulching will be accomplished within 24 hours following seeding with weed seed free mulch. It may be spread by hand, by a blower, or by other equipment. Straw mulch will be treated by light methods.

4.6.3.1 Mulching, using sterilyzed products, may be directed by the Site Construction Manager and approved by the Authorized Officer.

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4.6.3.1 Mulching, using sterilized products, may be directed by the Site Construction Manager and approved by the Authorized Officer.

4.6.4 Surfaces or gullies otherwise damaged following seeding and mulching, will be repaired by regrading, reseeding, refertilizing, and remulching, as necessary and otherwise, to maintain the areas in satisfactory condition for five years.

4.6.5 Seeding will be considered acceptable and completed when a full stand of vegetation completes two growing seasons.

4.6.6 Seed will be planted by drilling, broadcasting, or hydroseeding.

4.6.7 Drill seeding with a grass drill equipped with depth bands will be used where topography and soil conditions allow operation of equipment.

4.6.8 Broadcast seeding will be used for inaccessible or small areas that are not suitable for mechanical methods. Seed shall be covered by raking or harrowing.

4.6.9 Hydroseeding will be done in critical areas, as requested by the Authorized Officer and notification is provided to the Site Construction Manager. Hydroseeders shall be equipped with a rubber-coated gear pump and a paddle tank mixer.

4.6.4 Surfaces or utilities otherwise damaged following seeding and mulching, will be repaired by reseeding, resseeding, refertilizing, and remulching, as necessary and otherwise, to maintain the areas in satisfactory condition for five years.

4.6.5 Seeding will be considered acceptable and completed when a full stand of vegetation completes two growing seasons.

4.6.6 Sand will be planted by drilling, broadcasting, or hydroseeding.

4.6.7 Drill seeding with a grass drill equipped with depth bands will be used where topography and soil conditions allow operation of equipment.

4.6.8 Broadcast seeding will be used for inaccessible or small areas that are not suitable for mechanical methods. Seed shall be covered by raking or harrowing.

4.6.9 Hydroseeding will be done in critical areas, as requested by the Authorized Officer and notification is provided to the Site Construction Manager. Hydroseeders shall be equipped with a rubber-coated gear pump and a paddle tank mixer.

4.6.10 Seed shall be certified by an independent testing laboratory to meet the following Federal agency seed requirements.

- Certified tag - certification by State Department of Agriculture.
- Will not accept seed beyond last two crop years.
- Must be at least 90 percent pure live seed when certified.

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 4

TRANSPORTATION

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

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SECTION 4

TRANSPORTATION

DC TRANSMISSION LINE

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SECTION 4

TRANSPORTATION

DC TRANSMISSION LINE

1.0 PURPOSE

To mitigate, supplement and further outline measures required for road access during the construction of the transmission line across lands administrated by the BLM/FS in conjunction with the DC Transmission Line.

2.0 OBJECTIVES

2.1 To mitigate the adverse impacts of project related road use and construction activity on the resources.

2.2 To maintain and/or moderately upgrade existing access roads, consistent with project needs relating to the useful management of resources.

2.3 To hold mileage of new road construction to the minimum required for timely completion of the project. Only those roads that are essential to land management and/or line maintenance will be retained.

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 4

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2.3 To hold mileage of new road construction to the minimum required for timely completion of the project. Only those roads that are essential to land management and/or line maintenance will be retained.

2.4 To study the proposed location of all new roads in the planning stages in concert with local BLM/FS personnel. Where so stipulated by the BLM/FS, the roads will be completely restored to the natural contour upon completion of their use.

2.5 To provide a standard of design for new roads which will minimize and control erosion, degradation of water quality and damage to the watershed.

3.0 GENERAL REQUIREMENTS

The Contactor shall construct access roads in accordance with the construction plan and profiles, drawings and technical requirements.

3.1 The Contractor(s) shall construct access roads in accordance with FS/BLM permits and grants and in accordance with the construction plan and profile. The construction plan and profile will become part of the FS/BLM permits and grants by reference and will be appended to this COM Plan. Construction standards included in the construction plan consist of:

3.1.1 All planned changes and improvements to existing roads.

3.1.2 Location plans for temporary access roads.

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3.1.2 Location plans for temporary access roads.

3.1.3 U.S.G.S. 7.5 or 15 min. quadrangle maps delineating existing roads to be used for access.

3.1.4 Plans, profiles and details of new permanent access roads.

3.1.5 Applicable portions of BLM Document 9113.

3.2 Construction related travel shall be restricted to the designated access roads right-of-ways. Existing roads shall be used wherever possible. Unauthorized cross-country vehicular travel by construction and operation crews is prohibited.

3.3 Earth borrow material on BLM/FS land shall be obtained only from areas which have been authorized by the Authorized Officer.

3.4 Construction shall be suspended if weather or ground conditions are such that excessive soil damage will occur, as determined by the Authorized Officer. The contractor shall be notified in writing by the Site Construction Manager.

3.5 Waste material on BLM/FS land will be disposed of only in areas approved by the Authorized Officer.

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3.6 Temporary Overland Access Routes

3.6.1 Where stipulated by the BLM or FS, overland access shall be used. Travel outside the designated areas will be prohibited.

3.6.2 Overland access routes shall be staked and flagged, but no blading or grading will be permitted. Only that clearing and removal of obstructions required to permit travel by off-road vehicles will be permitted. Overland travel will be prohibited when weather conditions are such that ruts in excess of six inches will result.

3.7 New or Reconstructed Access Roads

3.7.1 New access roads on BLM administered lands shall be designed and constructed in accordance with the applicable portions of BLM Document 9113 as pertains to resource roads in mountainous areas.

On lands administered by the FS, new or reconstructed access roads shall be designed and constructed in accordance with the permit covering the particular road(s) in question. (See Introduction Section, subsection 3.1.).

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3.7.2 The Construction Contractor(s) shall be responsible for proper drainage on the right-of-way or as specified through use permits during the construction period. The Contractor(s) shall divert concentrated water flows from roadways and other disturbed areas into safe areas. Flowing water shall not be directed into natural stream channels without the approval of the Construction Manager and the Authorized Officer. The Contractor(s) shall spread flowing water over undisturbed soil.

3.7.3 After grading of unsurfaced roads, the Contractor shall cross-ditch the roadway and install "water bars." Water bars shall be sloped with the grade. The grade of the water bar shall be two percent greater that the grade of the road.

3.7.4 Excavated materials from cross-ditching and water bar installation shall be placed on the downgrade side of the ditch and extend from the outside shoulder line into the backslope to form a positive intercepting ditch.

3.7.5 Water bars shall be spaced on unsurfaced road grades of 2 to 4 percent at 400 foot intervals, 4 to 8 percent at 200 foot intervals, and greater than 8 percent at 100 foot intervals. In

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addition, water bars shall be installed at all alignment changes (curves), significant grade changes, and as requested by the Authorized Officer and communicated in writing by the Construction Manager.

3.8 Existing Roads

3.8.1 Existing roads, structures or drainage facilities which are damaged by the construction activity shall be replaced or repaired to a condition equal to or better than that which existed before the start of the project.

3.8.2 The roadway width of existing roads shall be maintained. Roadway widths shall not be increased nor alignment changes made without approval of the Authorized Officer.

3.9 Special Roadway Requirements

3.9.1 Roads crossing streams or washes at grade will be permissible unless otherwise specified. Where culverts are required in stream crossings, such culverts shall be of adequate size to accommodate the runoff of a 10 year storm for temporary roads and a 50 year storm for permanent roads and of sufficient strength to support construction and maintenance equipment.

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3.9.2 Ditches shall be constructed where necessary, but held to a minimum. Where ditches are installed, provisions shall be made to dispose of the accumulated water by one of the following methods:

3.9.2.1 Using wing ditches.

3.9.2.2 Directing water into stream channels with provisions to prevent silting of channel from roadway runoff.

3.9.2.3 Carrying water under or across roadway by means of culverts or grade dips. Such structures shall be designed and installed so that erosion will not occur on the outlet slope.

3.9.3 Remove, repair, replace, and/or construct improvements which are damaged, destroyed, or made necessary by the exercise of the rights granted herein as follows:

3.9.3.1 Protect, box, and pipe water outside of road right-of-way for any spring encountered during construction.

3.9.3.2 Provide permanent cattleguards or 16 foot steel gates for the following situations:

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3.9.3.1 Protect, box, and pipe water outside of road right-of-way for any springs encountered during construction.

3.9.3.2 Provide permanent centisquare or 15 foot steel gates for the following situations:

a. To avoid safety hazards.

b. To upgrade roads covered in the construction contract.

c. To replace a permanent existing cattleguard when it is damaged or destroyed by construction activities.

d. Cattleguards shall be installed in accordance with plans approved by the Authorized Officer.

e. Provide temporary cattleguards or a steel gate on all fences crossed with temporary roads.

f. Provide permanent cattleguards on all fences crossed by permanent roads.

g. Where cattleguards are utlilized, a 16 foot gate shall be provided in the fence immediately adjacent to the cattleguard to allow access by heavy equipment.

3.9.4 Wet and poorly drained roads shall not be used if deep rutting - in excess of 6 inches - will occur, unless approved by the Authorized Officer with written notification to the Contractor by the Site Construction Manager.

3.9.5 When directed by the Authorized Officer, dust control measures shall be used on all roads when dusting creates a nuisance, safety hazard, or damage to the existing road. Use of dust pallatives such as chlorides, oils, or other chemicals shall require prior approval of the Authorized Officer with specific approval notification to the Contractor, in writing, by the Site Construction Manager.

3.9.6 The Fire Protection, Erosion Control, Revegetation, and Restoration measures, Clearing and Flagging stipulations, and mitigation measures shall be considered a part of this section in their application to the appropriate phases of road construction. (See Section 1, 2 and 3).

3.9.7 Surfacing of permanent roads shall be optional, but if needed and approved by the Authorized Officer to allow construction to proceed, it will be applied during dry weather conditions when the roadbase is stable. Surfacing shall not be

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3.9.7 Surfacing of permanent roads shall be optional, but if needed and approved by the Authorized Officer to allow construction to proceed, it will be applied during dry weather conditions when the roadbase is stable. Surfacing shall not be

applied while a road is closed due to wet conditions.

4.0 CONDITIONS FOR ROAD ACCESS

4.1 The following conditions shall be used to govern the location, use and closure of access roads for project construction. The intent of these conditions apply only to roads which are actually needed and used during construction.

4.1.1 Locate all access roads to fit the topography and minimize side hill cuts. Short roads from existing roads to each tower site will be used to the extent practical.

4.1.2 The location and description of specific temporary and permanent access roads are specified on the plan and profile drawings.

The plan and profile drawings along with the site prescription forms for the various BLM districts and Dixie National Forest are included in the Appendix of this COM Plan as follows:

Richfield District	Appendix C
Cedar City District	Appendix D
Dixie National Forest	Appendix E
Las Vegas District	Appendix F
California Desert District	Appendix G

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4.2 Cleaning of Culverts and Ditches

4.2.1 The upper and lower ends as well as the inside of the pipe shall be throughly cleaned to provide an unobstructed flow to and through the pipes. Any loose material on the backslope adjacent to the entrance of culverts shall be removed.

4.2.2 All roadway ditches, lead-offs from culverts or cut sections, and lead-in ditches shall be cleaned of any material which would obstruct the flow. The work shall be accomplished so that reasonable conformance to previous line, grade, and cross section will be achieved.

4.3 Grade Dips

Grade dips shall be constructed and/or maintained so as to be sufficient depth and width to adequately drain the roadway, and will not be flat bladed over and filled in except in temporary situations when approved by the Site Construction Manager and the Authorized Officer. The lower end of grade dips shall be shaped to adequately drain away from roadway.

4.4 Removal of Obstructions

4.4.1 Removal of trees, limbs, brush, and obstructions will be limited to those which hang over the roadway obstructing the driver's sight distance, or within 14 feet vertical clearance above the roadway.

4.2 Cleaning of Culverts and Ditches

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4.4 Removal of Obstructions

4.4.1 Removal of trees, limbs, brush, and obstructions will be limited to those which hang over the roadway obstructing the driver's sight distance, or within 14 feet vertical clearance above the roadway.

4.4.2 Limbing will be accomplished by use of pruning saws, power saws, nippers, bow saws, or cross-cuts. Limbs will be pruned flush with the trunk of the tree, except for portions of overhanging limbs. Use of axes for limbing will be prohibited. Material removed will be scattered outside the road prism. Piling and burning will not be permitted unless otherwise provided for in Section 2.

4.4.3 Cattleguards

Cattleguards which will be crossed by construction vehicles and personnel shall be cleaned of all material to a depth of two feet below the grids prior to the start of construction and after the completion of construction activity on that section of line.

5.0 HELICOPTER ACCESS

Helicopter construction and access, if required, shall be used in areas where the natural terrain, habitat or other conditions precludes the use of conventional construction equipment. Construction of new access roads in these area shall not be allowed except as approved by the Authorized Officer.

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CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 5

VISUAL RESOURCES

DC TRANSMISSION LINE

CONSTRUCTION OPERATIONS AND

MAINTENANCE PLAN

SECTION 5

VISUAL RESOURCES

DC TRANSMISSION LINE

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1.0 PURPOSE

To provide mitigation for sensitive visual resources affected by the construction of the DC Transmission Line.

2.0 OBJECTIVE

To minimize the permanent modification of sensitive visual resources due to project related activities.

3.0 MITIGATION MEASURES

3.1 Specific mitigation measures for disturbed visual resources have been developed in accordance with the appropriate land management agency's recommendations for those areas adversly impacted by the DC Transmission Line. The environmental statement process has identified areas of visual sensitivity. Mitigation recommendations may include:

- Painting or "dulling" of structures
- Selective use of non-specular conductor
- Selective vegetative cutting and clearing
- Restoration of R-O-W following construction
- Access road preparation

3.2 The BLM and the Forest Service have determined the specific mitigation measures required. These specific mitigation measures, in addition to Sections 2, 3, and 4 respectively, for affected sections of California, Nevada, and Utah are included in Appendix A, Exhibit 1 of this COM Plan.

1.0 PURPOSE

To provide mitigation for sensitive visual resources affected by the construction of the DC Transmission Line.

2.0 OBJECTIVE

To minimize the permanent modification of sensitive visual resources due to project related activities.

3.0 MITIGATION MEASURES

3.1 Specific mitigation measures for disturbed visual resources have been developed in accordance with the appropriate land management agency's recommendations for those areas adversely impacted by the DC Transmission Line. The environmental statement process has identified areas of visual sensitivity. Mitigation recommendations may include:

* Painting or "dulling" of structures
* Selective use of non-specular conductor
* Selective vegetative cutting and clearing
* Restoration of R-O-W following construction
* Access road preparation

3.2 The BLM and the Forest Service have determined the specific mitigation measures required. These specific mitigation measures, in addition to Sections 2, 3, and 4 respectively, for affected sections of California, Nevada, and Utah are included in Appendix A, Exhibit 1 of this CCM Plan.

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 6

FLAGGING

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 6

FLAGGING

DC TRANSMISSION LINE

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CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 6

FLAGGING

DC TRANSMISSION LINE

1.0 PURPOSE

To provide flagging stipulations which shall be in effect during construction of the DC Transmission Line on U.S. Forest Service or Bureau of Land Management rights-of-way.

2.0 OBJECTIVE

To provide for the orderly identification of a wide variety of proposed activities in the field using colored plastic ribbon or paint.

3.0 COLOR CODE

Colors of plastic "flagging" shall be used for the following purposes:

	Purpose	Color
3.1	Construction Sites	Orange
3.2	Transmission Line Center Line	Blue
3.3	Transmission Line Center Line at Structures	Fluorescent Orange
3.4	Edge of right-of-way and/or reference stakes	Yellow
3.5	Danger Trees	Red Paint
3.6	Cultural Resources Sites	Blue and White striped
3.7	Changes by Authorized Officer	Red and White striped
3.8	Road Center Line	Red

3.11 The Authorized Officer and Site Construction Manager shall assign additional flagging requirements as needed.

3.12 All flagging shall be removed immediately after construction is completed.

Purpose	Color
3.1 Construction Site	Orange
3.2 Transmission Line Center Line	Blue
3.3 Transmission Line Center Line at Structure	Fluorescent Orange
3.4 Edge of right-of-way and/or reference stakes	Yellow
3.5 Danger Trees	Red Paint
3.6 Cultural Resources Site	Blue and White striped
3.7 Changes by Authorized Officer	Red and White striped
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CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 7

RADIO COMMUNICATIONS

DC TRANSMISSION LINE

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RADIO COMMUNICATIONS

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RADIO COMMUNICATIONS

DC TRANSMISSION LINE

1.0 PURPOSE

To provide a reliable radio communication between the Grant/Permit Holder and BLM/FS for maximum safety to life and property through operational coordination during the construction of the transmission line. This communication plan outlines the agreement between BLM/FS and the Grant/Permit Holder as to the methods of communication to be used during construction of the transmission line and the associated facilities on BLM/FS lands.

2.0 CONDITIONS FOR USE OF LADWP FACILITIES

Intermountain Power Agency, Bureau of Land Management and the Forest Service hereby agree upon the use of the LADWP radio facilities and frequencies on the DC Transmission Line by BLM/FS representatives for the duration of the transmission line construction, when they are available subject to the following conditions:

2.1 LADWP has the sole right to control the mobile radio units. BLM/FS operators shall operate the radio units subject to the instructions of the Site Construction Manager.

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SECTION 7

RADIO COMMUNICATIONS

DC TRANSMISSION LINE

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2.1 LADWP has the sole right to control the mobile radio units. BLM/FS operators shall operate the radio units subject to the instructions of the Site Construction Manager.

LADWP shall, at all times, have such access to and control of the mobile equipment to enable LADWP to carry out its responsibilities under its radio license.

2.2 The operation of all mobile units shall be in accordance with the Federal Communications Commission's rules, regulations and operating procedures.

2.3 The radio units, facilities and frequencies are the exclusive property of LADWP.

2.4 Only qualified persons authorized by LADWP shall service and maintain the radio units.

2.5 BLM/FS will use LADWP's radio units and facilities and frequencies to provide contact and coordination between BLM/FS and LADWP's field representatives on this construction project.

2.6 Six radios for BLM/FS's use shall be required on this project.

2.7 Telephone numbers and radio units numbers will be furnished prior to the initiation of construction.

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2.6 Six radios for BLM/FS's use shall be required on this project.

2.7 Telephone numbers and radio units numbers will be furnished prior to the initiation of construction.

3.0 CONTRACTOR COMMUNICATIONS

Communications between the Contractor and Construction Manager shall be maintained via mobile radio units furnished by the Contractor. The mobile units, facilities, and frequencies shall remain the exclusive property of the Contractor.

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 8

CULTURAL AND PALEONTOLOGICAL RESOURCES DC TRANSMISSION LINE

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CULTURAL AND PALEONTOLOGICAL RESOURCES

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1.0 INTRODUCTION

The execution of cultural and paleontological resource identification and evaluation studies is legally mandated on projects which are conducted on public lands. Such studies include archeology, ethnography, and paleontology and are required under one or more of the following:

- The Statutes of Executive Order 11593
- The National Historic Preservation Act of 1966
- The National Environmental Policy Act of 1970
- The Federal Land Policy and Management Act of 1976
- The Archeological Resources Protection Act of 1979

In accordance with these regulations, cultural and paleontological resources must be given full consideration on projects conducted on public lands to the extent that activities are allowed on these lands only when such activities demonstrate adequate means of identification and preservation of the cultural and paleontological resources present. These cultural resources measures will apply to all facilities constructed in conjunction with the DC Transmission Line.

2.0 PURPOSE

The cultural and paleontological resource measures included in this COM Plan supplement the work done during the EIS process and further outline those actions to be taken for

1.0 INTRODUCTION

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2.0 PURPOSE

The cultural and paleontological resource measures included in this COM Plan supplement the work done during the EIS process, and further outline those actions to be taken for

identification and protection of archeological and paleontological resources and ethnographical concerns found within the transmission line and access road rights-of-way prior to and during construction on land administered by the BLM or FS.

3.0 SURVEY

3.1 Archeological Resources

A BLM limited Class I (Literature Search) and a complete Class III (100 percent intensive inventory) archeological resources survey was performed on the DC Line right-of-way corridor and 200 foot right-of-way, respectively, under terms of a contract between Applied Conservation Technology (ACT) and Intermountain Power Agency (IPA). In addition, all roads constructed outside of the right-of-way will require a Class III survey. The results of these surveys can be found in the reports referenced in Appendix A, Exhibit 2. Recommended mitigation measures for known sensitive sites encountered during construction are included in Appendix A, Exhibit 2.

3.2 Paleontological Resources

Paleontological resources were also examined on the DC Transmission Line right-of-way corridor. A BLM limited Class I (Literature Search) and a Class III inventory of those areas identified as being potentially sensitive was conducted under terms of a contract between ACT and IPA. In addition, all roads constructed outside of the

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right-of-way will require a Class III survey. The results of this survey can be found in the reports referenced in Appendix A, Exhibit 2 of this COM Plan. Procedures to be followed concerning mitigation during construction are included in Appendix A, Exhibit 2 for sites of known potential sensitivity.

3.3 Ethnographic Resources

Ethnographic (Native American) studies have been conducted for the DC Transmission Line traversing California, Nevada, and Utah. The purpose of the studies were to determine which Native American groups traditionally used the area through which the DC Transmission Line is to be constructed; to determine what value these groups place on cultural resources which might be disturbed by the construction of the transmission line and associated structures; and to convey their recommendations for the mitigation of these impacts. The results of the studies can be found in the reports referenced in Appendix A, Exhibit 2. The Native American concerns have been included in the archeological mitigation procedures developed for affected sections of the DC Transmission Line corridor.

right-of-way will require a Class III survey. The results of this survey can be found in the reports referenced in Appendix A, Exhibit 2 of this CCM plan. Procedures to be followed concerning mitigation during construction are included in Appendix A, Exhibit 2 for sites of known potential sensitivity.

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4.0 MITIGATION MEASURES

4.1 Cultural Resources

Recommended mitigation measures for the known cultural resources recorded along the 200' wide right-of-way are listed in Appendix A, Exhibit 2. The potential for archeological or paleontogical manifestations may exist in the DC Transmission Line right-of-way. The Contractor shall at all times exercise due care and precautions in his construction activities relating to this potential.

4.2 Resources Encountered

If any additional cultural resource values are encountered during construction, construction activities will be halted in the vicinity of the site; the BLM/FS will determine their significance, and determine an appropriate course of action, and shall be responsible for coordinating any actions with the Grant/ Permit Holder and the State Historic Preservation Office (SHPO). The construction operations shall avoid the site until an investigation can be made to determine the potential of the find. The Site Construction Manager will notify the Contractor that the following mitigative actions will be implemented where appropriate should cultural resource sites be encountered during construction.

4.0 MITIGATION MEASURES

4.1 Cultural Resources

Recommended mitigation measures for the known cultural resources recorded along the 200' wide right-of-way are listed in Appendix A, Exhibit 2. The potential for archeological or paleontological manifestations may exist in the DC Transmission Line right-of-way. The contractor shall at all times exercise due care and precautions in his construction activities relating to this potential.

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4.2.1 Avoidance

Avoidance and thus preservation of any cultural resources encountered during construction of the transmission line is the most desirable procedure and is recommended whenever possible.

4.2.2 Physical Maintenance or Protection

Due to the types of cultural resources identified along the transmission line and access road right-of-way (see reports referenced under Appendix A, Exhibit 2), specific protection of sites (e.g. fencing or stabilization) is or is not a viable option. One protective measure which can be implemented is a policy directive to employees to avoid known site locations which are directly affected by project activities (See Section 6, "Flagging").

4.2.3 Scientific Investigation

Scientific investigation involves some level of intensive surface collection and/or subsurface testing or excavation. In the event that avoidance or protection of cultural resources identified during construction cannot be accomplished, data retrieval should be initiated. The BLM/FS will make a determination as to the significance of any cultural resources discovered and determine an appropriate course of action (See Section 2).

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Avoidance and thus preservation of any cultural resources encountered during construction of the transmission line is the most desirable procedure and is recommended whenever possible.

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Due to the types of cultural resources identified along the transmission line and access road right-of-way (see reports referenced under Appendix A, Exhibit 2), specific protection of sites (e.g. fencing or stabilization) is or is not a viable option. One protective measure which can be implemented is a policy directive to employees to avoid known site locations which are directly affected by project activities (see section 6, "Flagging").

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5.0 PROCEDURES

5.1 The potential for archeological or paleontogical manifestations may exist in the DC Transmission Line right-of-way. The Contractor shall at all time exercise due care and precautions in his construction activities relating to this potential.

5.2 In the event that an archeological site or paleontogical locality be discovered, the Contractor shall immediately notify the Site Construction Manager so that proper indentification can be made of the site and proper salvage techniques may be implemented. The Site Construction Manager will immediately notify the Authorized Officer.

5.3 The construction operations shall avoid the site until an investigation can be made to determine the potential of the find. Provisions for this procedure are detailed in Section 2.

5.0 PROCEDURES

5.1 The potential for archaeological or paleontological manifestations may exist in the DC Transmission Line right-of-way. The Contractor shall at all time exercise due care and precautions in his construction activities relating to this potential.

5.2 In the event that an archaeological site or paleontological locality be discovered, the Contractor shall immediately notify the Site Construction Manager so that proper identification can be made of the site and proper salvage techniques may be implemented. The Site Construction Manager will immediately notify the Authorized Officer.

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SECTION 9

THREATENED AND ENDANGERED PLANTS AND ANIMALS

DC TRANSMISSION LINE

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THREATENED AND ENDANGERED

PLANTS AND ANIMALS

1.0 INTRODUCTION

Threatened and endangered plant and animal studies (T&E Plans) are required as a result of the federal endangered species act of 1973 (PL 93-205). The act provides for active collection of information on threatened and endangered plant and animal species which occur on federal lands. In accordance with the act, activities are allowed on federal lands only when such activities incorporate adequate means of identification and protection of threatened and endangered plant and animal species.

These threatened and endangered plant and animal studies supplement the work done during the EIS process and is summarized in Appendix A, Exhibits 3 and 4 of this COM plan. The appropriate mitigation measures outline those actions to be taken prior to and during construction for the identification and protection of threatened and endangered plant and

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 9

THREATENED AND ENDANGERED PLANTS AND ANIMALS

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Threatened and endangered plant and animal studies (T&E plans) are required as a result of the federal endangered species act of 1973 (PL 93-205). The act provides for active collection of information on threatened and endangered plant and animal species which occur on federal lands. In accordance with the act, activities are allowed on federal lands only when such activities incorporate adequate means of identification and protection of threatened and endangered plant and animal species.

These threatened and endangered plant and animal studies supplement the work done during the EIS process and is summarized in Appendix A, Exhibits 3 and 4 of this CCM plan. The appropriate mitigation measures outline those actions to be taken prior to and during construction for the identification and protection of threatened and endangered plant and

animal species located within the DC Transmission Line right-of-way.

2.0 REGULATION COMPLIANCE

2.1 Threatened and Endangered Plants

To fulfill requirements of the "Endangered Species Act of 1973" for plant life in the project area, the Grant/ Permit Holder has provided a BLM approved botanist to examine potential threatened and endangered plant habitats occuring within the transmission line corridor and its associated facilities on federal lands. The results of these studies can be found in the reports referenced in Appendix A, Exhibit 3.

2.2 Threatened and Endangered Animals

To fulfill requirements of the "Endangered Species Act of 1973" for wildlife in the project area, the grant/permit holder has provided a BLM approved wildlife biologist to examine potential threatened and endangered animals existing within the transmission line corridor and its associated facilities on federal lands. The results of these studies can be found in the reports referenced in Appendix A, Exhibit 4.

animal species located within the DC transmission line right-of-way.

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2.2 Threatened and Endangered Animals

To fulfill requirements of the "Endangered Species Act of 1973" for wildlife in the project area, the grant/permit holder has provided a BLM approved wildlife biologist to examine potential threatened and endangered animals existing within the transmission line corridor and its associated facilities on federal lands. The results of these studies can be found in the reports referenced in Appendix A, Exhibit 4.

3.0 MITIGATION MEASURES

3.1 Threatened and Endangered Plants

Survey results indicate that conflicts between certain T&E plant species and transmission line construction may be unavoidable within the transmission line right-of-way. If avoidance is not feasible, then mitigation measures taken may include the presence of a qualified botonist to monitor construction activities and/or the impacted plant species be made known to local botanic gardens for their consideration relative to possible transplanting of such specimens. These concerns and mitigation recommendations are listed in Appendix A, Exhibit 3 of this COM plan.

3.2 Threatened and Endangered Animals

Based on information contained in the threatened and endangered animals report, a wildlife mitigation plan has been prepared by the Grant/Permit Holder in conjunction with the Authorized Officer and the U.S. Fish and Wildlife Service. The plan outlines the measures to be taken by the Contractor to minimize disturbance to wildlife in the area of the DC Transmission Line project facilities.

Where restrictions on the timing of construction are listed as wildlife mitigation measures, the appropriate state wildlife agency may give a written recommendation

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Where restrictions on the timing of construction are listed as wildlife mitigation measures, the appropriate state wildlife agency may give a written recommendation

to waive this restriction in designated right-of-way sections depending on habitat conditions and wildlife movement. After receiving written notice of the recommendation, the BLM/FS may allow construction during the previously restrictive time periods.

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BLASTING

DC TRANSMISSION LINE

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BLASTING

DC TRANSMISSION LINE

1.0 PURPOSE

The purpose of the blasting provisions are to provide an encompassing plan for the use and storage of blasting materials.

2.0 GENERAL PROVISIONS

2.1 Fuses shall not be used for blasting.

2.2 Explosive cords shall not be used without written permission of the land management agency which may specify conditions under which such explosives may be used, precautions to be taken, and similar measures.

2.3 If blasting operations are required adjacent to highways, a matting of some type shall be necessary in order to prevent flying debris from reaching the highway.

2.4 Explosive materials shall not be stored on Federal land without prior written permission from the BLM/FS.

CONSTRUCTION, OPERATIONS AND

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BLASTING

DC TRANSMISSION LINE

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2.3 If blasting operations are required adjacent to highways, a matting of some type shall be necessary in order to prevent flying debris from reaching the highway.

2.4 Explosive materials shall not be stored on federal land without prior written permission from the BLM/FS.

2.5 During Fire Condition Class 4, a watchman equipped with a long handled, round pointed No. 0 or larger shovel and a filled five-gallon backpack pump shall stay at the blast location for one hour after blasting is done. Blasting will not be permitted within the right-of-way during fire manning class 5 and area closures (See Section 1).

3.0 PROCEDURES

3.1 All blasting operations shall be carried out under and conform to the guidelines outlined in the latest edition of the 175th Anniversary Edition of the Blaster's Handbook.

3.2 The blasting procedure shall be divided into three parts: Non-Water Blasting, Storage Requirements, and In-water Blasting if required.

3.3 The Contractor shall develop and prepare a blasting plan for submittal to the appropriate Federal and State agencies for approval. This plan will become part of the COM plan by amendment.

3.4 No blasting operations shall be undertaken until approval of Federal and State agencies have been obtained.

2.5 During fire condition Class 4, a watchman equipped with a long handled, round pointed No. 0 or larger shovel and a filled five-gallon backpack pump shall stay at the blast location for one hour after blasting is done. Blasting will not be permitted within the right-of-way during fire warning class 5 and area closures (see Section 11).

3.0 PROCEDURES

3.1 All blasting operations shall be carried out under and conform to the guidelines outlined in the latest edition of the 175th Anniversary Edition of the Blaster's Handbook.

3.2 The blasting procedure shall be divided into three parts: Non-Water Blasting, Storage Requirements, and In-water Blasting if required.

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3.4 No blasting operations shall be undertaken until approvals of Federal and State agencies have been obtained.

3.5 Where necessary to protect surrounding property, each charge shall be matted with some type of mat to prevent flying debris. If blasting is properly done, matting will not be required in most non-populated areas, however, the Contractor shall respect the wishes of the landowner or the agency having jurisdiction.

3.6 Blasting will be very closely managed by the Site Construction Manager and Authorized Officer in a manner that will protect live springs, reservoirs or water wells, pipelines, dwellings, recreation trails, roads, highways, recreation site developments, and other improvements. IPA's contractor shall employ an individual qualified and knowledgeable in the use of explosives. Charges shall be limited in size to the minimum required for reasonable removal of the excavation material by excavating equipment after the blasting. The safety of construction personnel and the public will be provided during any blasting operation with ingress to any blasting area limited by the Contractor to only authorized personnel. The Authorized Officer will be notified prior to any blasting.

3.5 Where necessary to protect surrounding property, each charge shall be matted with some type of mat to prevent flying debris. If blasting is properly done, matting will not be required in most non-populated areas, however, the contractor shall respect the wishes of the landowner or the agency having jurisdiction.

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SECTION 11

HEALTH AND SAFETY

DC TRANSMISSION LINE

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HEALTH AND SAFETY

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HEALTH AND SAFETY

DC TRANSMISSION LINE

1.0 PURPOSE

To provide a health and safety program during the construction and maintenance of the DC Transmission Line.

2.0 SOLID WASTE CONTROL

2.1 Purpose

The purpose of Solid Waste Control is to provide procedures for the removal and disposal of solid wastes, i.e., garbage, timber, undergrowth, etc.

2.2 Definitions

2.2.1 "Waste" as used herein means all discarded matter, including, but not limited to human waste, trash, garbage, refuse, oil drums, petroleum products, and equipment.

2.2.2 "Vegetation" means vegetive material from marketable timber, non-marketable timber, understory, and ground cover.

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION II

HEALTH AND SAFETY

DC TRANSMISSION LINE

1.0 PURPOSE

To provide a health and safety program during the construction and maintenance of the DC Transmission Line.

2.0 SOLID WASTE CONTROL

2.1 Purpose

The purpose of Solid Waste Control is to provide procedures for the removal and disposal of solid wastes, i.e., garbage, timber, underbrush, etc.

2.2 Definitions

2.2.1 "Waste" as used herein means all discarded matter, including, but not limited to human waste, trash, garbage, refuse, oil drums, petroleum products, and equipment.

2.2.2 "Vegetation" means vegetive material from marketable timber, non-marketable timber, understory, and ground cover.

2.3 Provisions

Solid Waste Control includes procedures for removal of all wastes.

2.3.1 All construction generated waste shall be removed or disposed from Federal land. If any waste is dumped on Federal land, the material shall be removed and the area restored. If necessary, contaminated ground shall be excavated, disposed of as directed by the Authorized Officer, and replaced with suitable fill material, compacted and restored to original condition by the Contractor.

2.3.2 There shall be no release of crank case oil, etc., into streams or soil by the Contractor.

2.3.3 Waste concrete and washout from concrete trucks will be disposed of at the batch plant site or a place satisfactory to the Authorized Officer.

2.3.4 All noncombustible wastes such as conductor, ceramic, or metal scraps will be hauled away by the Contractor.

2.3.5 The Contractor will follow a litter policing schedule on all roads associated with the project as approved by the Authorized Officer.

2.3.6 Garbage shall be collected as it is generated and properly contained for disposal in an approved landfill operation.

2.3.7 The construction sites will be kept free from accumulation of waste materials and rubbish resulting from construction activities as required for safety, appearance, and avoidance of fire hazards.

2.3.8 Rock will be dispersed at the site or removed and disposed of as directed by the Authorized Officer.

2.3.9 Human wastes will be collected in portable toilets. Portable toilets will be located at equipment staging and storage yards located on Federal lands. The portable toilets will be emptied at an appropriate frequency and disposed of in an appropriate manner at a State-approved site.

3.0 OIL AND GAS SPILLS

3.1 Purpose

The purpose of these oil and gas spill provisions is to provide comprehensive procedures to be used in the event of an oil or gas spill.

3.2 Regulations

Regulations concerning oil and gas spills are found in Title 40 of the Code of Federal Regulations, part 112.

3.3 Procedures

3.3.1 The major impetus of the oil and gas spill provisions is prevention. The Contractor shall inspect all tanks, valves, fittings, etc., to determine conditions and required maintenance.

3.3.2 If storage tanks are required by the Contractor, a containment system, such as Dikes, large enough to contain 1 1/4 times the storage capacity shall be used. The dikes will have a minimum top width of 1 1/2 feet and the wall slope will be 1:1 or less. Dikes will be provided with drainage controls to allow for controlled drainage of collected material. Accumulations of liquid hydrocarbons and rainwater containing liquid hydrocarbons will be removed and disposed of in accordance with approved practices. Valves will

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be provided with small dikes of sufficient size to contain temporary leaking at the valve. Locations of storage tanks will be approved by the Authorized Officer.

3.3.3 Vehicles transporting gas and/or oil will carry a shovel or other implement to contain a small spill. Dirt will be spread on the surface of the spill to reduce the velocity of the flow. If possible, absorbent materials will be used.

3.3.4 On-site maintenance of construction equipment or vehicles will not release gas or oil on or off the right-of-way. All gas or oil substances will be drained into containers and disposed of in an approved site and manner, satisfactory to the Authorized Officer.

3.3.5 Procedures for large oil and gas spills

3.3.5.1 If the spill is of such magnitude that the Contractor cannot contain it, the Authorized Officer may call a state agency, etc., for assistance. Actions to be taken will be in compliance with the appropriate state's latest oil and hazardous spills directory.

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3.3.5.2 In the event an oil or gas spill enters or has the imminent potential for entering a flowing stream, the Contractor shall notify the proper state offices and the Site Construction Manager. The Authorized Officer will be immediately notified by the Site Construction Manager and all steps possible will be taken to contain and clean up the spill Containment of oil and gas spills in waterways will include, but will not be limited to, use of a natural absorbent, i.e., hay or an industrial absorbent.

3.3.5.3 The Site Construction Manager will submit written reports for all oil and gas spills to pertinent State and Federal agencies. Reports will include, but not be limited to:

(1) Location.

(2) Name, title and telephone number of person reporting the spill.

(3) Time and date of spill.

(4) Material spilled.

(5) Estimated quantity and area affected.

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(3) Time and date of spill.

(4) Material spilled.

(5) Estimated quantity and area affected.

(6) Action taken for containment and cleanup.

(7) Water body involved.

(8) Special circumstances, if any.

4.0 PESTICIDES, HERBICIDES, AND OTHER CHEMICAL CONTROLS

This section will not apply to the transmission line construction, as none will be used during construction. (Future maintenance and operation plans may be developed and approved by the Authorized Officer, if required.)

5.0 EMERGENCY RESPONSE

5.1 Purpose

The purpose of these emergency response provisions is to expedite the reporting of emergencies and needed follow-up measures and activities. As used herein, emergenices shall apply to personal injuries and property damage.

5.2 Definitions

5.2.1 Personal injuries as used herein shall be defined as those requiring services other than first aid treatment and transportation to medical facilities under private vehicle.

5.3 Procedures

5.3.1 Emergency procedures for Wild Fire Protection shall be as outlined in Section 1.

(6) Action taken for containment and cleanup.

(7) Water body involved.

(8) Special circumstances, if any.

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5.2.1 Personal injuries as used herein shall be defined as those requiring services other than first aid treatment and transportation to medical facilities under private vehicle.

5.3 Procedures

5.3.1 Emergency procedures for wild fire protection shall be as outlined in section 1.

5.3.2 In case of personal injury, first aid treatment and procedures shall be initiated to determine extent and nature of injury. If emergency medical services are required, the use of the communication system outlined in Section 7 shall be used to notify the Contractor's field office and request ambulance service and other appropriate help.

5.3.3 Accidents involving property damage needing emergency measures shall be reported to the Contractor's field office and the Site Construction Manager by the use of the communications system outlined in Section 7. After notification, preventive procedures shall be instituted to prevent further damage.

5.3.4 A written report shall be prepared by the Contractor giving all pertinent information and copies given to the Site Construction Manager. In case of personal injuries, accident forms shall be filed with the appropriate authority having jurisdiction.

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6.0 TRAFFIC CONTROL

6.1 Purpose

The purpose of these traffic control stipulations is to provide for the safety of project workers and the general public in their use of highways and roads crossing Federal lands.

6.2 Provisions

6.2.1 Provide and place appropriate temporary guards, signs, bridges, lights, and other signals as necessary for public safety, where required by the BLM/FS.

6.2.2 The Contractor shall exercise due caution and care when operating to prevent undue conflict with public use of the roads.

6.2.3 A reflectorized "Slow Moving" vehicle emblem shall be attached to all slow moving equipment.

6.2.4 The Contractor shall place signs with flags at either end of areas being worked to warn road users of work in progress. Signs shall meet the requirements of the "Manual on Uniform Traffic Control Devices". Signs shall be posed only when machinery is operating and shall not precede machinery by more than 1/2 mile.

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6.2.5 Where construction activities occur at major road crossings or near same that could create an unsafe condition, the Contractor will employ the use of flagmen in addition to warning signs to control traffic and/or warn of possible danger.

7.0 AIR QUALITY CONTROL

7.1 Purpose

The purpose of the Air Quality Control measures is to provide a program designed to minimize air emissions and to maintain the quality of air resources in a condition as free from air pollution as is practical.

7.2 Procedure

Air pollution, resulting from transmission line construction, will occur from "fugitive emissions" and any allowed "open-burning." The Air Quality Control Procedure consists of two types; the first type applies to the minimizing and suppressing of fugitive emissions, and the second type concerns rules for open burning.

7.3 Fugitive Emissions

7.3.1 Construction of the transmission line and related facilities will cause a temporary increase in fugitive dust, especially in the more arid and cultivated areas. The amount of dust caused by construction will vary according to climatic

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conditions; for example, if precipitation and/or frozen ground are encountered during construction, dust levels will be reduced; if strong winds and little precipitation are to ccur, fugitive dust levels will increase. Ambient levels of nitrogen oxides, hydrocarbons, and carbon monoxide near the construction zone will be increased due to emissions from heavy construction equipment. The emissions will be temporary and will decrease as construction crews move on.

7.3.2 The Contractor shall not handle materials, nor store, use a road, construct, alter, or repair any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne and creating nuisance conditions. Such precautions will include the following methods:

7.3.2.1 Use, where necessary, of fresh water for control of dust in the construction operation, the grading of roads, or the clearing of land and right-of-way.

7.3.2.2 Apply fresh water on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts.

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7.3.2.2 Apply fresh water on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts.

7.3.2.3 Enclose, fully or partially, material stockpiles in cases where application of fresh water is not sufficient to prevent particulate matter from becoming airborne.

7.3.2.4 Mat consolidated rock blasting operations where required (See Section 1).

7.3.2.5 Cover open bodied trucks transporting materials likely to become airborne when in motion.

7.3.2.6 Remove promptly from paved roads earth or other materials which do or may become airborne

7.3.2.7 Prevent excessive exhaust emissions from vehicles and heavy equipment by proper maintenance.

7.4 Open Burning

7.4.1 The use of open burning as a method of transmission line construction waste disposal will be employed when it can be shown that such burning is absolutely necessary, and no other practicable waste disposal alternative is available (See

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7.4.1 The use of open burning as a method of transmission line construction waste disposal will be employed when it can be shown that such burning is absolutely necessary, and no other practicable waste disposal alternative is available (See

Section 1). Burning of other materials will not be permitted.

7.4.2 Open burning in violation of any rule, regulation, or order shall be extinguished by the person in attendance or person responsible when notified to extinguish the fire. Any open fires shall be constantly attended by a responsible person until extinguished. All combustible material to be open burned shall be dried to prevent emissions of excessive smoke and stacked or windrowned to eliminate dirt, rocks, and other noncombustible material, and to promote efficient burning. Equipment and tools shall be available to periodically re-stack the burning material to ensure that combustion is essentially complete and that smoldering fires are prevented.

7.4.3 No open burning which creates any of the following shall be allowed:

a. a private nuisance;

b. a public nuisance;

c. a hazard to public safety.

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7.4.3 No open burning which creates any of the following shall be allowed:

a. a private nuisance;

b. a public nuisance;

c. a hazard to public safety.

7.4.4 Any waste materials which normally emit dense smoke, noxious odors, or which may tend to create a public nuisance shall not be burned.

7.4.5 Before igniting any open fire, approval shall be obtained from the Authorized Officer and the Site Construction Manager. In addition, the following notifications will be given and/or received:

7.4.5.1 Notify local adminstrative unit.

8.0 SAFETY POLICIES AND PROGRAM

8.1 Purpose

The purpose of these policies and program is to provide minimum requirements that shall be followed by the Contractor during construction operations. It is intended to provide for the safety and welfare of contractor employees, Grant/Permit holder personnel, and the general public.

8.2 Plan

8.2.1 The Contractor shall be solely responsible for initiating, implementing, maintaining, and supervising all safety precautions and programs in connection with the transmission line construction. This shall include employee

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8.2.1 The Contractor shall be solely responsible for initiating, implementing, maintaining, and supervising all safety precautions and programs in connection with the transmission line construction. This shall include employee

safety training and prompt elimination of all unsafe physical and/or mechanical conditions. The Contractor shall take any precaution necessary to ensure the safety of all exposed personnel and property.

8.2.2 The Contractor shall have an established safety program and methods of implementing the program during the construction of the transmission line.

8.2.3 All safety procedures and programs shall be equal to or better than the Occupational Safety and Health administration, State and local agencies having jurisdiction.

8.2.4 The Contractor shall provide training or require that his employees are knowledgable and proficient in procedures involving emergency situations and first aid fundamentals.

8.2.5 The BLM/FS requires as minimum standards the transmission line construction safety practices as outlined in the Bureau of Reclamation "Power System Safety Standards," 1978 and "Construction Safety Standards", 1979. The construction contractor shall comply with applicable sections of these standards during construction.

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CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 12

WATER QUALITY

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 12

WATER QUALITY

DC TRANSMISSION LINE

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WATER QUALITY

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CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 12

WATER QUALITY

DC TRANSMISSION LINE

1.0 PURPOSE

The purpose of the River, Stream and Floodplain Crossing Procedure is to provide information on techniques and encompassing methods for the crossing of waterways.

2.0 GENERAL REQUIREMENTS

2.1 The contractor shall comply with the Federal regulations concerning the crossing of waterways as listed in Title 33 of the Code of Federal Regulations, Part 323.

2.2 Design clearances over all navigable waterways shall be in accordance with the requirements of the U.S. Army Corps of Engineers, REA, and NESC, whichever is more stringent.

2.3 Before beginning construction activities requiring crossing of waterways, the Contractor shall obtain all necessary permits.

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 12

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DC TRANSMISSION LINE

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2.1 The contractor shall comply with the Federal regulations concerning the crossing of waterways as listed in Title 33 of the Code of Federal Regulations, Part 323.

2.2 Design clearances over all navigable waterways shall be in accordance with the requirements of the U.S. Army Corps of Engineers, FAA, and NESC, whichever is more stringent.

2.3 Before beginning construction activities requiring crossing of waterways, the Contractor shall obtain all necessary permits.

2.4 Construction activities for the DC Transmission Line will occur outside of the waterways, and the Contractor's activities shall be limited to access only.

2.5 Construction activities shall be forbidden on or near the banks of waterways.

2.6 Temporary access roads and permanent access roads crossing waterways shall be in accordance with Section 3.

2.7 Crossing of waterways that cannot be forded shall be limited to conductor stringing operations. The crossing by means of a pulling line can be accomplished by the used of a boat or helicopter.

2.8 The natural meander of the streams shall not be restructed.

2.9 No water diversion structures shall be used.

2.10 Blasting, use of heavy equipment, and other construction activities within 500 feet of springs will be carried on as directed by the Site Construction Manager and Authorized Officer.

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2.6 Temporary access roads and permanent access roads crossing waterways shall be in accordance with Section 3.

2.7 Crossing of waterways that cannot be forded shall be limited to conductor stringing operations. The crossing by means of a pulling line can be accomplished by the used of a boat or helicopter.

2.8 The natural meander of the stream shall not be restricted.

2.9 No water diversion structures shall be used.

2.10 Blasting, use of heavy equipment, and other construction activities within 500 feet of springs will be carried on as directed by the Site Construction Manager and Authorized Officer.

3.0 WETLAND CROSSING

3.1 In all wetland areas containing surface water at the time of construction, care shall be taken to assure as little disturbance as possible to these areas. The Contractor's procedures shall be approved by the Authorized Officer.

4.0 CHEMICAL CHANGES

4.1 Construction of the project will not result in a water temperature change; an alteration of the physical/chemical nature of the water body; or interference with aquifer development.

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 13

SITE PRESCRIPTION

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

SECTION 13

SITE PRESCRIPTION

DC TRANSMISSION LINE

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SITE PRESCRIPTION

DC TRANSMISSION LINE

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CONSTRUCTION, OPERATIONS AND

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SECTION 13

SITE PRESCRIPTION

DC TRANSMISSION LINE

1.0 PURPOSE

The site prescription is a mini development and rehab plan for a very small part of a large R/W, such as a power transmission line tower site, maitenance or storage yard.

2.0 OBJECTIVES

To protect and restore a critical site during and after construction.

3.0 PROCEDURE

The attached tower site prescription is an example of a power transmission line tower prescription prepared for this project. The Contractor shall abide by the provisions in the completed site prescription forms and conduct his construction operation accordingly.

The site prescriptions shall be completed and approved by an authorized representative of the BLM/FS and IPA. All site prescriptions will not be completed prior to approval of the

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

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SITE PRESCRIPTION

DC TRANSMISSION LINE

1.0 PURPOSE

The site prescription is a mini development and rehab plan for a very small part of a large R/W, such as a power transmission line tower site, maintenance or storage yard.

2.0 OBJECTIVES

To protect and restore a critical site during and after construction.

3.0 PROCEDURE

The attached tower site prescription is an example of a power transmission line tower prescription prepared for this project. The contractor shall abide by the provisions in the completed site prescription forms and conduct his construction operation accordingly.

The site prescriptions shall be completed and approved by an authorized representative of the BLM/FS and IPA. All site prescriptions will not be completed prior to approval of the

COM plan. No construction will be allowed to begin at a tower site until a site prescription has been completed and approved for that site.

TOWER SITE OR CONSTRUCTION SITE PRESCRIPTION

Ownership: BLM ( ) FS ( ) District:
Date Prepared: Date Amended:
Tower Number: Division: Station Number: T ____ R ____
Type of Tower: Line Tower ( ) Angle Tower ( )
Construction Site: Division: Station Number: T ____ R ____
Type of Terrain:
Type of Soil:
Type of Vegetation:

Construction Method	Helicopter	Surface Grading Allowed	No Grading Allowed
Footing			
Erection			
Conductor			

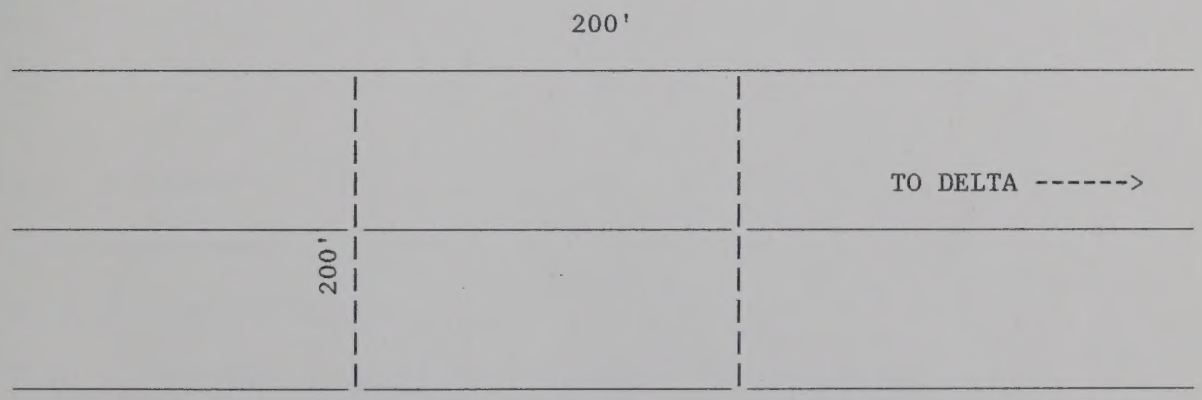
Construction Stipulations: (Circle Appropriate Numbers)

1. No clearing allowed
2. Trees to be saved will be flagged
3. Stockpile cleared vegetation
4. Strip and stockpile topsoil in areas to be graded

Rehabilitation Stipulations: (Circle Appropriate Numbers)

1. Rip and scarify all disturbed areas including graded areas to a 12 inch depth
2. Restore natural contours and stockpiled topsoil to all graded areas
3. Revegetate all disturbed areas using seed packet number _____
4. Scatter stockpiled cleared vegetation on all revegetated areas
5. Abandon temporary access road
6. No counterpoise allowed

SITE SKETCH



LEGEND

|_| Construction area: Grading not to exceed _____ sq. ft. in this area

Area where no grading or clearing is allowed
+ Tower or construction site center

Additional Stipulations:

APPROVAL SIGNATURES OF FINAL PRESCRIPTION

IPA Authorized Representative	Date	BLM/FS	Date

TOWER SITE OR CONSTRUCTION SITE DESCRIPTION

Ownership: BLM ( ) FS ( ) District:
Date Prepared: Date Amended:
Tower Number: Division: Station Number: T ____ R ____
Type of Tower: Site Tower ( ) Angle Tower ( )
Construction Site: Division: Station Number: T ____ R ____
Type of Terrain:
Type of Soil:
Type of Vegetation:

Construction method	Helicopter	Surface Grading Allowed	No Grading Allowed
Footing			
Erection			
Conductor			

Construction Stipulations: (Circle Appropriate Numbers)

1. No clearing allowed
2. Trees to be saved will be flagged
3. Stockpile cleared vegetation
4. Strip and stockpile topsoil in areas to be graded

Rehabilitation Stipulations: (Circle Appropriate Numbers)

1. Rip and scarify all disturbed areas including graded areas to a 12 inch depth
2. Restore natural contours and stockpiled topsoil to all graded areas
3. Revegetate all disturbed areas using seed packet number _____
4. Scatter stockpiled cleared vegetation on all revegetated areas
5. Abandon temporary access road
6. No counterpoise allowed

SITE SKETCH

200'

		TO DELTA ------->
	200'	

LEGEND

[ ] Construction area: Grading not to exceed _____ sq. ft. in this area

Area where no grading or clearing is allowed
+ Tower or construction site center

Additional Stipulations:

APPROVAL SIGNATURES OF FINAL TOWERSITE

BLM Authorized Representative	Date	SIGNERS	Date

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 14

RIGHT-OF-WAY MANAGEMENT

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND
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SECTION 14

RIGHT-OF-WAY MANAGEMENT
DC TRANSMISSION LINE

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SECTION 14

RIGHT-OF-WAY MANAGEMENT

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SECTION 14

RIGHT-OF-WAY MANAGEMENT

DC TRANSMISSION LINE

1.0 PURPOSE

These Right-Of-Way (ROW) Management Measures outline the activities to be taken following construction of the transmission line so that the transmission line ROW is managed according to BLM and Forest Service guidelines and land use plans. The ROW Management Plan is concerned with the management of surface lands associated with the ROW in conjunction with routine operation and maintenance of the DC Transmission Line.

2.0 MEASURES

These Right-Of-Way Management Measures are developed for managing the ground surface after all construction mitigating measures have been applied. The surface management is the normal day-to-day activities that take place on BLM and Forest Service administered land. And is not to be confused with the physical operation and maintenance of power through the transmission line. The normal management activities will be handled by the appropriate BLM and Forest Service Offices. IPA becomes involved in surface management when maintenance

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

SECTION 14

RIGHT-OF-WAY MANAGEMENT
DC TRANSMISSION LINE

1.0 PURPOSE

These Right-of-Way (ROW) Management Measures outline the activities to be taken following construction of the transmission line so that the transmission line ROW is managed according to BLM and Forest Service guidelines and land use plans. The ROW Management plan is concerned with the management of surface lands associated with the ROW in conjunction with routine operation and maintenance of the DC Transmission Line.

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or restoration and mitigation measures are needed and/or they propose changes in the right-of-way that would involve surface disturbing activities, or when it is necessary to do maintenance work on the right-of-way.

3.0 RESPONSIBILITY

3.1 IPA

Following construction, IPA will be responsible for maintaining the appearance of the ROW. IPA will notify the appropriate Forest Service or BLM Office of any proposed changes in the ROW facilities or of any proposed surface disturbing activities. The BLM/FS Authorized Officer will authorize any surface disturbing activities. If surface disturbing activities occur, IPA will be responsible for mitigation as outlined in the Use Permit, the ROW Grant and this Construction, Operations and Maintenance Plan.

3.2 Federal Land Management Agency

Following construction, the BLM and Forest Service will incorporate the ROW into the normal activities of the area. This will include livestock grazing, wildlife, possibly other ROWs, recreation, and other activities as needed. The BLM and Forest Service will be responsible for granting other permits for using the ROW area and for making sure that uses are consistent with the BLM's and Forest Service's land use planning. The Forest Service and BLM will consult with IPA before

or restoration and mitigation measures are needed and/or they proposes changes in the right-of-way that would involve surface disturbing activities, or when it is necessary to do maintenance work on the right-of-way.

3.0 RESPONSIBILITY

3.1 IPA

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allowing any activities that could interfere with the operation and maintenance of the transmission line. Any modifications to the ROW by IPA will be approved by the BLM or Forest Service office having jurisdiction prior to any ground disturbing activities.

4.0 TRANSMISSION LINE SURVEILLANCE AND MAINTENANCE

Operation and maintenance of the transmission line will be consistent with the management of the ROW as specified herein as developed for federal lands. Maintenance activities on the transmission line and associated facilities will generally consist of periodical inspections by IPA according to the performance of the various facilities. The maintenance of the transmission line may require the pruning of any tall vegetation that poses a hazard. Noxious weeds will be controlled. These activities will be conducted in accordance with stipulations set forth in this COM Plan, the Special Use Permits (Forest Service), and the Right-Of-Way Grant (BLM).

The environmental guidelines found in "Environmental Criteria for Electrical Transmission Systems", published by the United States Department of Agriculture (USDA) and Department of Interior (USDI), and "Electric Power Transmission and the Environment" published by the Federal Power Commission (now Department of Energy), will be followed in determining the ROW clearing and line maintenance procedures. Once the line is installed, IPA will patrol the transmission line periodically by fixed wing aircraft, helicopter, vehicle or on foot.

allowing any activities that could interfere with the operation and maintenance of the transmission line. Any modifications to the ROW by IPA will be approved by the BLM or Forest Service office having jurisdiction prior to any ground disturbing activities.

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Line maintenance will vary from routine inspections to emergency repairs required to restore line service.

The maintenance crews will trim the trees and vegetation where necessary, and remove any obstacles within the ROW as required to prevent accidental grounding contact with the conductors. Should the use of herbicides be necessary, only USDA-USDI-recommended and EPA-approved herbicides will be used. In most areas accepted standard utility practices such as repeated tree trimming will be followed to maintain the ROW. These activities would be coordinated with the local BLM District or FS Area having jurisdication prior to their initiation.

The transmission lines will be maintained using the same types of equipment used during construction. The Authorized Officer will be notified prior to initiating routine maintenance work and will provide guidance on resource protection measures.

5.0 PESTICIDE AND HERBICIDE USE

5.1 Purpose

These Pesticides and Herbicide Use Measures will supplement the Site Specific Practices and Mitigation Measures and outline measures to be followed during maintenance of the transmission line ROW should the use of chemicals be necessary on lands managed by the Forest Service and BLM.

Line maintenance will vary from routine inspections to emergency repairs required to restore line service.

The maintenance crews will trim the trees and vegetation where necessary, and remove any obstacles within the ROW as required to prevent accidental grounding contact with the conductors. Should the use of herbicides be necessary, only USDA-USDI-recommended and EPA-approved herbicides will be used. In most areas accepted standard utility practices such as repeated tree trimming will be followed to maintain the ROW. These activities would be coordinated with the Local BLM District or FS Area having jurisdiction prior to their initiation.

The transmission lines will be maintained using the same types of equipment used during construction. The Authorized Officer will be notified prior to initiating routine maintenance work and will provide guidance on resource protection measures.

5.0 PESTICIDE AND HERBICIDE USE

5.1 Purpose

These Pesticides and Herbicide Use Measures will supplement the Site Specific Practices and Mitigation Measures and outline measures to be followed during maintenance of the transmission line ROW should the use of chemicals be necessary on lands managed by the Forest Service and BLM.

5.2 Measures

Should the use of biochemicals be necessary, only USDA- or USDI-recommended, and EPA-approved chemicals will be used. These substances will never be used on the banks of streams or where runoff will wash the chemicals directly into a stream. Herbicides, oil and other chemicals will not be stored or disposed of in such a way as to allow drainage into surface or underground waters, or into areas where harm could be inflicted on wildlife, domestic animals, plants or man. These substances will not be permanently stored on federal lands.

The use of chemicals such as herbicides, fungicides and fertilizers will comply with State and Federal laws, regulations and policy concerning the use of posionous, hazardous, or persistent substances. State and Federal wildlife agencies would be contacted if application of any of these substances will be on or near sensitive wildlife areas. Application of these substances will be by ground methods.

Prior to the use of such substances on or near the Right-Of-Way Grant or Special Use Permit areas, IPA will obtain approval of a written plan for such use from the local BLM District or FS Area having jurisdiction. The plan would outline the kind of chemical, methods of application, purpose of application and other information as required. All use of pesticides, herbicides and

5.2 Measures

Should the use of biochemicals be necessary, only USDA- or USDI-recommended, and EPA-approved chemicals will be used. These substances will never be used on the banks of streams or where runoff will wash the chemicals directly into a stream. Herbicides, oil and other chemicals will not be stored or disposed of in such a way as to allow drainage into surface or underground waters, or into areas where harm could be inflicted on wildlife, domestic animals, plants or man. These substances will not be permanently stored on federal lands.

The use of chemicals such as herbicides, fungicides and fertilizers will comply with State and Federal laws, regulations and policy concerning the use of poisonous, hazardous, or persistent substances. State and federal wildlife agencies would be contacted if application of any of these substances will be on or near sensitive wildlife areas. Application of these substances will be by ground methods.

Prior to the use of such substances on or near the right-of-way Grant or Special Use Permit areas, IPA will obtain approval of a written plan for such use from the local BLM District or FS Area having jurisdiction. The plan would outline the kind of chemical, methods of application, purpose of application and other information as required. All use of pesticides, herbicides and

other substances on or near the ROW shall be in accordance with the approved plan and all control regulations for such substances.

CONSTRUCTION, OPERATIONS

AND

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APPENDIX "A"

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

APPENDIX A

EXHIBIT 1

VISUAL RESOURCE PROTECTION

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

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EXHIBIT 1

VISUAL RESOURCE PROTECTION

DC TRANSMISSION LINE

1.0 COMPLIANCE

The use of non-specular conductor and non-reflective towers as specific mitigation measures is prescribed under general terms included in the right-of-way grant for federal lands administered by the BLM and the special use permit governing lands administered by the U.S. Forest Service. These visual resource protection measures will be conducted in addition to the provisions of Section 2, 3, and 4 of this COM Plan.

2.0 VISUAL RESOURCE MITIGATION - NON-SPECULAR CONDUCTOR

STATE	LOCATION	LENGTH (MILES)
California*	From Adelanto Converter Station to Tower Site 4601 Towers 4601 to Adelanto Rack	17.5
Nevada	From California-Nevada State Line East to Tower Site 3482 (I-15 crossing) Towers 3482 to 3603	7.4

CONSTRUCTION, OPERATIONS AND MAINTENANCE PLAN

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EXHIBIT 1

VISUAL RESOURCE PROTECTION DC TRANSMISSION LINE

1.0 COMPLIANCE

The use of non-specular conductor and non-reflective towers as specific mitigation measures is prescribed under general terms included in the right-of-way grant for federal lands administered by the BLM and the special use permit governing lands administered by the U.S. Forest Service. These visual resource protection measures will be conducted in addition to the provisions of Section 2, 3, and 4 of this CCM Plan.

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STATE	LOCATION	LENGTH (MILES)
California	From Adelanto Converter Station to Tower Site 4601 Towers 4601 to Adelanto Rack	17.5
Nevada	From California-Nevada State Line East to Tower Site 3482 (I-15 crossing) Towers 3422 to 3601	7.4

STATE	LOCATION	LENGTH (MILES)
Nevada	Arrowhead Division, towers 3072 to 3093 (inclusive); Dutch Division, towers 3201 to 3267 (inclusive).	21.6
Nevada	Moapa Division, towers 2904 to 2909 (inclusive); Arrowhead Division, towers 3001 to 3011 (inclusive).	4.8
Nevada	Pole Division, towers 2633 to 2669 (inclusive); Moapa Division, towers 2801 to 2844 (inclusive).	21.5
Utah	Sevier Division, towers 435 to 457 (inclusive).	5.5
Utah	Dixie National Forest Towers 2060 to 2223 (inclusive).	21.0

* Use of non-specular conductor not required by the BLM in California; However, it will be installed at the option of IPA.

STATE	LOCATION	LENGTH (MILES)
Nevada	Arrowhead Division, towers 3072 to 3093 (inclusive); Euclid Division, towers 3201 to 3207 (inclusive).	21.6
Nevada	Moapa Division, towers 2904 to 2909 (inclusive); Arrowhead Division, towers 3001 to 3011 (inclusive).	6.*
Nevada	Pole Division, towers 2633 to 2654 (inclusive); Moapa Division, towers 2801 to 2844 (inclusive).	21.5
Utah	Sevier Division, towers 435 to 457 (inclusive).	5.5
Utah	Dixie National Forest Towers 2060 to 2223 (inclusive).	21.0

* Use of non-specular conductor not required by the BLM in California; However, it will be installed at the option of IPA.

3.0 VISUAL RESOURCE MITIGATION - NON-REFLECTIVE TOWERS

STATE	LOCATION	NUMBER OF TOWERS
Nevada	Arrowhead Division, towers 3003 to 3008 (inclusive);	6
	Arrowhead Division, towers 3092 and 3093;	2
	Dutch Division, towers 3201 to 3263 (inclusive)	64
Utah	Dixie National Forest Towers 2061 to 2222 (inclusive)	87

CONSTRUCTION, OPERATIONS AND

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EXHIBIT 2

CULTURAL AND PALEONTOLOGICAL RESOURCE MITIGATION PROCEDURES

DC TRANSMISSION LINE

NOTE:

Studies for certain sections of the DC Transmission Line have not been completed at this time. Only completed sections are currently addressed in Exhibit 2. Upon completion of additional line sections, revisions to Exhibit 2 will be submitted for review and approval.

CONSTRUCTION, OPERATIONS AND

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EXHIBIT 2

CULTURAL AND PALEONTOLOGICAL RESOURCE MITIGATION PROCEDURES

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3.1 Utah Section - IPP Generating Station to Dead Horse Junction. 4

3.2 Utah Section - Dead Horse Junction to Utah/Nevada Border 4

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CULTURAL AND PALEONTOLOGICAL RESOURCES

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2.3 Nevada Section. 3

2.4 California Section. 3

3.0 Paleontological Resources. 4

3.1 Utah Section - IPP Generating Station to

Dead Horse Junction. 4

3.2 Utah Section - Dead Horse Junction to

Utah/Nevada Border 4

3.3 Nevada Section 4

3.4 California Section. 5

1.0 GENERAL PROCEDURES

The following general procedures will be performed:

1. Contractor and subcontractor employees will be required to strictly observe laws regarding antiquities, including surface collection. Employees will be made aware of the laws, and the penalties for not strictly observing them; they will be made aware of the procedures discussed in section 8 regarding the discovery of cultural resources during construction activities.

2. Any vandal activity will be reported to the Authorized Officer.

3. Intermountain Power Agency will provide approved archaeologists and paleontologist during groundbreaking construction activities along the right-of-way for the areas indicated below.

4. Archaeological and paleontological resource sites encountered during groundbreaking construction activities will be recorded and procedures will be developed to appropriately and legally mitigate adverse effects resulting from project implementation.

5. Systematic surface collection and/or salvage of cultural and paleontological resources sites which are encountered and cannot be avoided will be arranged through IPA's Environmental Consultant listed below.

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6. IPA's Environmental Consultant's is:

Applied Conservation Technology (ACT), Inc.
233 East Imperial Highway, Suite 155
Fullerton, California 92635

Attention: Mr. Gary Dudley
(714) 738-8992

2.0 ARCHAEOLOGICAL AND HISTORICAL RESOURCES

2.1 UTAH SECTION - IPP GENERATING STATION TO DEAD HORSE JUNCTION

TOPAZ, SEVIER, and MILFORD DIVISIONS

Specific mitigation measures will be required in these divisions. See Appendix B, Exhibit 1, Article 2 for mitigation procedures.

BORDEN, BLACK ROCK, and ESCALANTE DIVISIONS

No mitigation required during construction.

Monitoring Areas

Archaeological and Historical Resource monitoring areas are included in Appendix B, Exhibit 1, Article 2.1.3.

2.2 UTAH SECTION - DEAD HORSE JUNCTION TO UTAH/NEVADA BORDER

MUDSPRING, NEWCASTLE, TOBIN, and BENCHES DIVISIONS

See Appendix B, Exhibit 1, Article 2 for mitigation procedures.

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2.2 UTAH SECTION - DEAD HORSE JUNCTION TO UTAH/NEVADA BORDER

MUDSPRING, NEWCASTLE, TOBIN, and ENCLESS DIVISIONS

See Appendix B, Exhibit 1, Article 2 for mitigation procedures.

2.3 NEVADA SECTION

MOAPA DUTCH and IVANPAH DIVISIONS

Specific mitigation measures will be required in these divisions. See Appendix B, Exhibit 1, Article 3.0 for mitigation procedures.

BENCHES, POLE, and ARROWHEAD DIVISIONS

No mitigation required during construction.

MONITORING AREAS

None

2.4 CALIFORNIA SECTION

KINGSTON, TURQUOISE, RED PASS, DAGGETT, and GEORGE DIVISIONS

Specific mitigation measures will be required in these divisions. See Appendix B, Exhibit 1, Article 4.0 for mitigation procedures.

STODDARD DIVISION

No mitigation required during construction.

MONITORING AREAS

Archaeological and Historical resource monitoring areas are included in Appendix B, Exhibit 1, Article 4.1.3.

2.3 NEVADA SECTION

MOAPA DUTCH and IVANPAH DIVISIONS

Specific mitigation measures will be required in these divisions. See Appendix B, Exhibit 1, Article 3.0 for mitigation procedures.

BENCHES, POLE, and ARROWHEAD DIVISIONS

No mitigation required during construction.

MONITORING AREAS

None

2.4 CALIFORNIA SECTION

KINGSTON, TURQUOISE, RED PASS, DAGGETT, and GEORGE DIVISIONS

Specific mitigation measures will be required in these divisions. See Appendix B, Exhibit 1, Article 4.0 for mitigation procedures.

STODDARD DIVISION

No mitigation required during construction.

MONITORING AREAS

Archaeological and Historical resource monitoring areas are included in Appendix B, Exhibit 1, Article 4.1.3.

3.0 PALEONTOLOGICAL RESOUCES

3.1 UTAH SECTION - IPP GENERATING STATION TO DEAD HORSE JUNCTION

TOPAZ, SEVIER, and BORDEN DIVISIONS

Montoring will be required in some areas. See Appendix B, Exhibit 1, Article 5.0 for areas to be monitored.

BLACK ROCK MILFORD, ESCALANTE DIVISIONS

No monitoring expected during construction.

3.2 UTAH SECTION - DEAD HORSE JUNCTION TO UTAH/NEVADA BORDER

MUD SPRING, NEWCASTLE, TOBIN, and BENCHES (Utah Portion) DIVISIONS

Montoring will be required in some areas. See Appendix B, Exhibit 1, Article 5.0 for areas to be monitored.

3.3 NEVADA SECTION

BENCHES (Nevada Portion),POLE, MOAPA, ARROWHEAD, DUTCH and IVANDAH DIVISIONS

Montoring will be required in some areas. See Appendix B, Exhibit 1, Article 6.0 for areas to be monitored.

3.0 PALEONTOLOGICAL RESOURCES

3.1 UTAH SECTION - IPP GENERATING STATION TO DEAD HORSE JUNCTION

TOPAZ, SEVIER, and BORDEN DIVISIONS

Monitoring will be required in some areas. See Appendix B, Exhibit 1, Article 5.0 for areas to be monitored.

BLACK ROCK HILFORD, RIGALANTE DIVISIONS

No monitoring expected during construction.

3.2 UTAH SECTION - DEAD HORSE JUNCTION TO UTAH/NEVADA BORDER

MUD SPRING, NEWCASTLE, ZOBIN, and BENCHES (Utah Portion) DIVISIONS

Monitoring will be required in some areas. See Appendix B, Exhibit 1, Article 5.0 for areas to be monitored.

3.3 NEVADA SECTION

BENCHES (Nevada Portion),FOLK, MORA, ARROWHEAD, DUTCH and IVANPAH DIVISIONS

Monitoring will be required in some areas. See Appendix B, Exhibit 1, Article 5.0 for areas to be monitored.

3.4 CALIFORNIA SECTION

KINGSTON, TURQUOISE, RED PASS, DAGGETT STODDARD and GEORGE DIVISIONS

Montoring will be required in some areas. See Appendix B, Exhibit 1, Article 7.0 for areas to be monitored.

CONSTRUCTION, OPERATIONS AND

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EXHIBIT 3

SUMMARY OF PLANT LIFE

AND MITIGATION MEASURES

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

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SUMMARY OF PLANT LIFE

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SUMMARY OF PLANT LIFE

AND MITIGATION MEASURES

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1.0 COMPLIANCE

For the transmission line sections listed below, Threatened and Endangered Plant Inventory and Significance Evaluation reports (see references) have been submitted and their recommendations accepted by the appropriate Federal Land Management Agency. For sensitive botanical resources identified along the 200-foot wide right-of-way, procedures have been developed to approximately and legally mitigate adverse effects resulting from project implementation.

2.0 THREATENED AND ENDANGERED BOTANICAL RESOURCES

CALIFORNIA SECTION

TRANSMISSION LINE RIGHT-OF-WAY

GEORGE, STODDARD, DAGGETT, RED PASS, TURQUOISE, and KINGSTON DIVISIONS

No mitigation required during construction

ACCESS ROADS LOCATED OUTSIDE THE 200-FOOT RIGHT-OF-WAY

No such areas were identified that warranted performing botanical resources inventory and significance evaluations.

NEVADA SECTION

TRANSMISSION LINE RIGHT-OF WAY

1.0 COMPLIANCE

For the transmission line sections listed below, Threatened and Endangered Plant Inventory and Significance Evaluation reports (see references) have been submitted and their recommendations accepted by the appropriate Federal Land Management Agency. For sensitive, botanical resources identified along the 200-foot wide right-of-way, procedures have been developed to appropriately and legally mitigate adverse effects resulting from project implementation.

2.0 THREATENED AND ENDANGERED BOTANICAL RESOURCES

CALIFORNIA SECTION

TRANSMISSION LINE RIGHT-OF-WAY

CODEGE, STODDARD, DAGGETT, RED PASS TROPONICO, and KINGSTON DIVISIONS

No mitigation required during construction

ACCESS ROADS LOCATED OUTSIDE THE 200-FOOT RIGHT-OF-WAY

No such areas were identified that warranted performing botanical resources inventory and significance evaluations.

NEVADA SECTION

TRANSMISSION LINE RIGHT-OF WAY

IVANPAH and DUTCH DIVISION

See Appendix B, Exhibit 2, Article 3.1 for mitigation during construction.

ARROWHEAD and MOAPA DIVISIONS

See Appendix B, Exhibit 2, Article 3.1 for required mitigation.

POLE (to Clark/Lincoln Counties Line) DIVISION

No sensitive species were found in this division.

POLE (Lincoln County Line north to next division) and BENCHES DIVISION

Mitigation measures have been initiated. See Appendix B, Exhibit 2.

ACCESS ROADS LOCATED OUTSIDE THE 200-FOOT RIGHT-OF-WAY

Ecological resource clearance studies will need to be conducted in areas outside of the 200-foot right-of-way.

UTAH SECTION

TRANSMISSION LINE RIGHT-OF-WAY

BENCHES DIVISION

See Appendix B, Exhibit 2, Article 4.1 for required mitigation

IVANPAH and DUTCH DIVISION

See Appendix B, Exhibit 2, Article 3.1 for mitigation during construction.

ARROWHEAD and MOJAVA DIVISIONS

See Appendix B, Exhibit 2, Article 3.1 for required mitigation.

POLE (to Clark/Lincoln Counties line) DIVISION

No sensitive species were found in this division.

POLE (Lincoln County line north to next division) and BENCHES DIVISION

Mitigation measures have been initiated. See Appendix B, Exhibit 2.

ACCESS ROADS LOCATED OUTSIDE THE 200-FOOT RIGHT-OF-WAY

Ecological resource clearance studies will need to be conducted in areas outside of the 200-foot right-of-way.

UTAH SECTION

TRANSMISSION LINE RIGHT-OF-WAY

BENCHES DIVISION

See Appendix B, Exhibit 2, Article 4.1 for required mitigation

TOBIN DIVISION

No sensitive species were encountered in this division.

NEWCASTLE (only non-US Forest Service Lands) DIVISION

See Appendix B, Exhibit 2, Article 4.1 for required mitigation

NEWCASTLE (US FOREST SERVICE LANDS) DIVISION

See Appendix B, Exhibit 2, Article 4.1 for required mitigation

MUDSPRING DIVISION

No sensitive species were encountered in this division.

ESCALANTE, MILFORD, BLACK ROCK, BORDEN, SEVIER, and TOPAZ DIVISIONS

No population of any plant species of concern were found to occur in any of these divisions.

ACCESS ROADS LOCATED OUTSIDE THE 200-FOOT RIGHT-OF-WAY

BLACKROCK and BORDEN DIVISIONS

See Appendix B, Exhibit 2, Article 4.2 for required mitigation

ESCALANTE,MILFORD,SEVIER,and TOPAZ DIVISIONS

No mitigation required during construction.

TOBIN DIVISION

No sensitive species were encountered in this division.

NEWCASTLE (only non-US Forest Service lands) DIVISION

See Appendix B, Exhibit 2, Article 4.1 for required mitigation

NEWCASTLE (US FOREST SERVICE LANDS) DIVISION

See Appendix B, Exhibit 2, Article 4.1 for required mitigation

MUDSPRING DIVISION

No sensitive species were encountered in this division.

ESCALANTE, MILFORD, BLACK ROCK, BORDEN, SEVIER, and TOPAZ DIVISIONS

No population of any plant species of concern were found to occur in any of these divisions.

ACCESS ROADS LOCATED OUTSIDE THE 200-FOOT RIGHT-OF-WAY

BLACKROCK and BORDEN DIVISIONS

See Appendix B, Exhibit 2, Article 4.1 for required mitigation

ESCALANTE,MILFORD,SEVIER,and TOPAZ DIVISIONS

No mitigation required during construction.

BENCHES TOBIN, NEWCASTLE, and MUD SPRING DIVISIONS

Ecological resources clearance studies will need to be conducted in these divisions.

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

APPENDIX A

EXHIBIT 4

SUMMARY OF WILD LIFE

AND MITIGATION MEASURES

DC TRANSMISSION LINE

CONSTRUCTION, OPERATIONS AND

MAINTENANCE PLAN

APPENDIX A

EXHIBIT 4

SUMMARY OF WILD LIFE

AND MITIGATION MEASURES

DC TRANSMISSION LINE

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APPENDIX A

EXHIBIT 4

SUMMARY OF WILD LIFE

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DC TRANSMISSION LINE

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2.0 Threatened and Endangered Wild Life. 1

3.0 References 4

1.0 COMPLIANCE

For the transmission line sections listed below, Threatened and Endangered Wildlife Inventory and Significance Evaluation Reports (see References) have been submitted and their recommendations accepted by the appropriate Federal Land Management Agency. For sensitive wildlife identified along 200-foot wide right-of-way, procedures have been developed to appropriately mitigate adverse effects resulting from project implementation. Mitigation procedures will also be included on the site prescription forms for the affected areas.

2.0 THREATENED AND ENDANGERED WILDLIFE

CALIFORNIA SECTION

GEORGE, STODDARD, DAGGETT, RED PASS, TURQUOISE, and KINGSTON DIVISIONS

No mitigation required during construction

NEVADA SECTION

1. The grantee will be required to provide an experienced desert tortoise biologist during new road construction, tower site clearing, and pulling and tensioning sites within the following areas:

Moapa Division	Twrs 2801-2818 inclusive & 2862-2905 inclusive

1.0 COMPLIANCE

For the transmission line sections listed below, Threatened and Endangered Wildlife Inventory and Significance Evaluation Reports (see References) have been submitted and their recommendations accepted by the appropriate Federal Land Management Agency. For sensitive wildlife identified along 200-foot wide right-of-way, procedures have been developed to appropriately mitigate adverse effects resulting from project implementation. Mitigation procedures will also be included on the site preservation forms for the affected areas.

2.0 THREATENED AND ENDANGERED WILDLIFE

CALIFORNIA SECTION

GEORGE, STOCKBARN, DACCETT, RED PAST, TURQUOISE, and KINGSTON DIVISIONS

No mitigation required during construction.

NEVADA SECTION

1. The grantee will be required to provide an experienced desert tortoise biologist during new road construction, tower site clearing, and pulling and tensioning sites within the following areas:

Moapa Division Twin 2801-2818 inclusive
& 2863-2905 inclusive

Pole Division Twrs 2612-2669 inclusive

Ivanpah Division Twrs 3466-3478 inclusive

a. During the above identified activities and in the areas specified, the biologist will locate and flag tortoise burrows prior to the initiation of surface disturbing activities. The flagged areas will be avoided whenever possible during construction.

b. Hibernating tortoises dug up as a result of construction activities will be turned in to the Nevada Department of Wildlife, Region III Headquarters, 4747 W. Vegas Drive, Las Vegas, Nevada.

c. Whenever active tortoises are encountered, they will be moved a safe distance (at least 150 yards) to avoid injury, to a shady place. Tortoises should be handled very gently and for as short a period as possible.

2. The grantee is required in areas other than those specified in No. 1 above to move active tortoises encountered during construction activities a safe distance (at least 150 yards) to avoid injury, to a shady place. Tortoises should be handled very gently and for as short a period as possible.

Pole Division Twrs 2612-2669 inclusive

Ivanpah Division Twrs 3466-3476 inclusive

a. During the above identified activities and in the areas specified, the biologist will locate and flag tortoise burrows prior to the initiation of surface disturbing activities. The flagged areas will be avoided whenever possible during construction.

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2. The grantee is required in areas other than those specified in No. 1 above to move active tortoises encountered during construction activities a safe distance (at least 150 yards) to avoid injury, to a shady place. Tortoises should be handled very gently and for as short a period as possible.

3. The grantee will inform the construction crews of techniques to properly move tortoises without inflicting injury. In addition, the grantee will be responsible for informing construction crews of the areas listed under No. 1 above and the restrictions required to protect tortoises.

4. Tortoises shall not be collected by construction personnel. The grantee shall inform all individuals constructing the facilities, of Nevada Administrative Code 503.080 which states that desert tortoise is a protected and rare species. Removal of tortoise from the wild is punishable by a minimum $100.00 fine. The grantee will inform construction personnel of the status and laws pertaining to deser tortoises.

ARROWHEAD, DUTCH, and BENCHES DIVISION

No mitigation required during construction

UTAH SECTION

BENCHES DIVISION

Mitigation during construction will be required; procedures are pending.

TOPAZ, SEVIER, BORDEN, and BLACK ROCK, MILDFORD, ESCALANTE, MUD SPRING NEWCASTLE, and TOBIN DIVISIONS

No mitigation required during construction

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4. Tortoises shall not be collected by construction personnel. The grantee shall inform all individuals constructing the facilities, of Nevada Administrative Code 503.080 which states that desert tortoise is a protected and rare species. Removal of tortoise from the wild is punishable by a minimum $100.00 fine. The grantee will inform construction personnel of the status and laws pertaining to desert tortoises.

ARROWHEAD, DUTCH, and BENCHES DIVISION

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UTAH SECTION

BENCHES DIVISION

Mitigation during construction will be required; procedures are pending.

TOPAZ, SEVIER, BORDEN, and BLACK ROCK, MILFORD, ESCALANTE, MUD SPRING NEWCASTLE, and TOBIN DIVISIONS

No mitigation required during construction.

3.0 REFERENCES

CALIFORNIA

No report required

NEVADA

Karl, Alice and E. Linwood Smith
1983 Intermountain Power Project (IPP): ± 500 kV DC Intermountain-Adelanto Line 1 (Revised), Nevada Portion, Desert Tortoise Inventory and Significance Evaluation, Final Report. E.L. Smith and Associates, Tucson, Arizona. Estimated release date: September 26, 1983.

UTAH

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3.0 REFERENCES

CALIFORNIA

No report required

NEVADA

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